

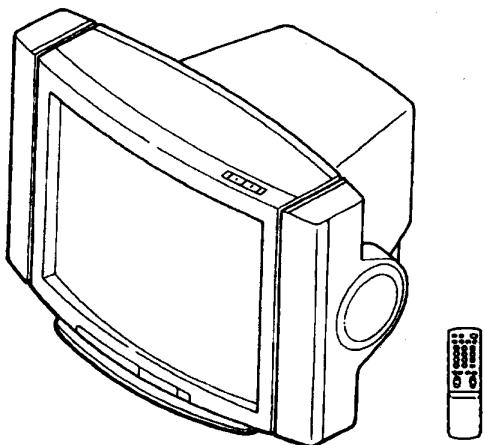
**KV-L34SN11**  
RM-845P

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# SERVICE MANUAL

*Australian Model*

*Chassis No. SCC-G71C-A*



**G3F CHASSIS**

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**MODELS OF THE SAME SERIES**

KV-L34SN11	KV-K25MF2/K29MF2
KV-L34MF1/L34MH11	KV-K29MF1
KV-L34MN11	

**TRINITRON® COLOR TV**  
**SONY®**



**SPECIFICATIONS**

		<b>Note</b>
<b>Power requirements</b>	110-240 V AC, 50/60 Hz	
<b>Power consumption (W)</b>	174	
<b>Television system</b>	B/G, I, D/K, M	
<b>Color system</b>	PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58	
<b>Stereo system</b>	NICAM Stereo B/G, I ; A2 Stereo (German) B/G	
<b>Channel coverage</b>		
<b>B/G</b>	VHF : E2 to E12 / UHF : E21 to E69 / CATV : S01 to S03, S1 to S41 VHF : 0 to 5, 5A 6 to 12 / UHF : 28 to 69 VHF : 1 to 10	
<b>I</b>	UHF : B21 to B68 / CATV : S01 to S03, S1 to S41	
<b>D/K</b>	VHF : R1 to R12 / UHF : R21 to R60 / CATV : S01 to S03, S1 to S41	
<b>M</b>	VHF : A2 to A13 / UHF : A14 to A79 / CATV : A-8 to E, G to W+25, W+27 to W+84	
<b>Antenna</b>	75-ohm external antenna terminal for VHF/UHF	
<b>Audio output (speaker)</b>	13W × 2	
<b>Number of terminal</b>		
<b>Video</b>	Input : 3 Output : 1	
<b>Audio</b>	Input : 3 Output : 1	
<b>S1-Video</b>	Input : 2	Y : 1 Vp-p, 75 ohms, unbalanced, sync negative C : 0.286 Vp-p, 75 ohms
<b>External speaker</b>	Output : 1	
<b>Picture tube</b>	Hi Black Trinitron	
<b>Tube size (inch)</b>	34	Measured diagonally
<b>Screen size (cm)</b>	80	Measured diagonally
<b>Dimensions (w/h/d, mm)</b>	781.0 × 664.5 × 607.8 1000.6 × 664.5 × 607.8 (including speakers)	
<b>Mass (kg)</b>	70.1 77.5 (including speakers)	
<b>Accessories Supplied</b>	Remote commander (1) Size R6 (AA) battery (1)	
<b>Optional</b>	TV stand SU-L34	

Design and specifications are subject to change without notice.

**CAUTION**

**SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.**

**SAFETY-RELATED COMPONENT WARNING!!**

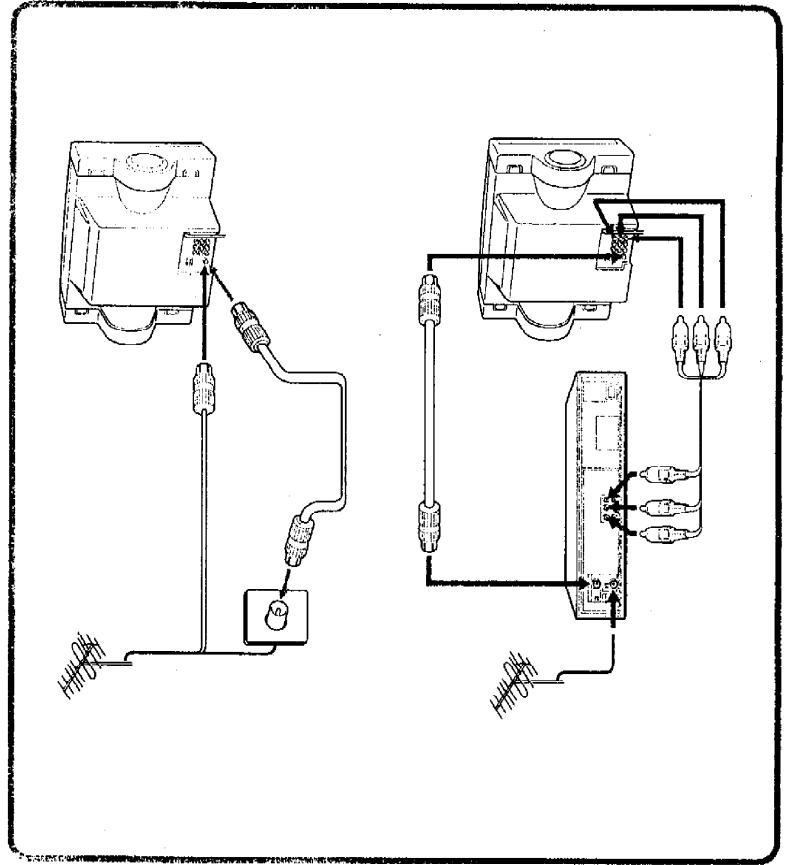
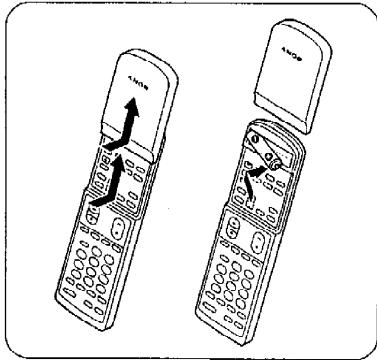
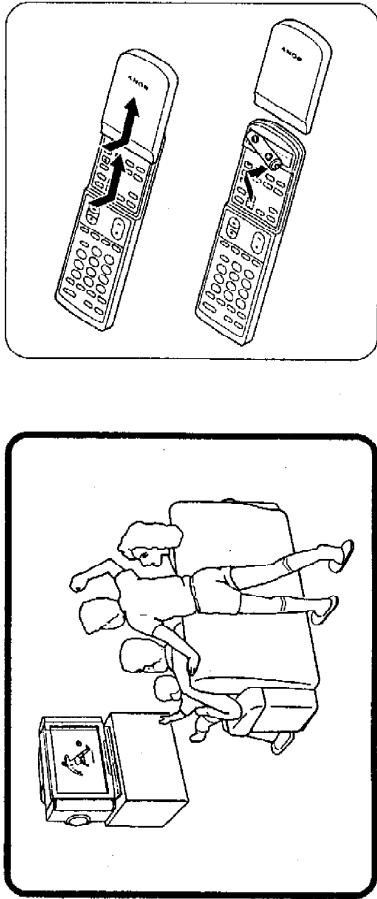
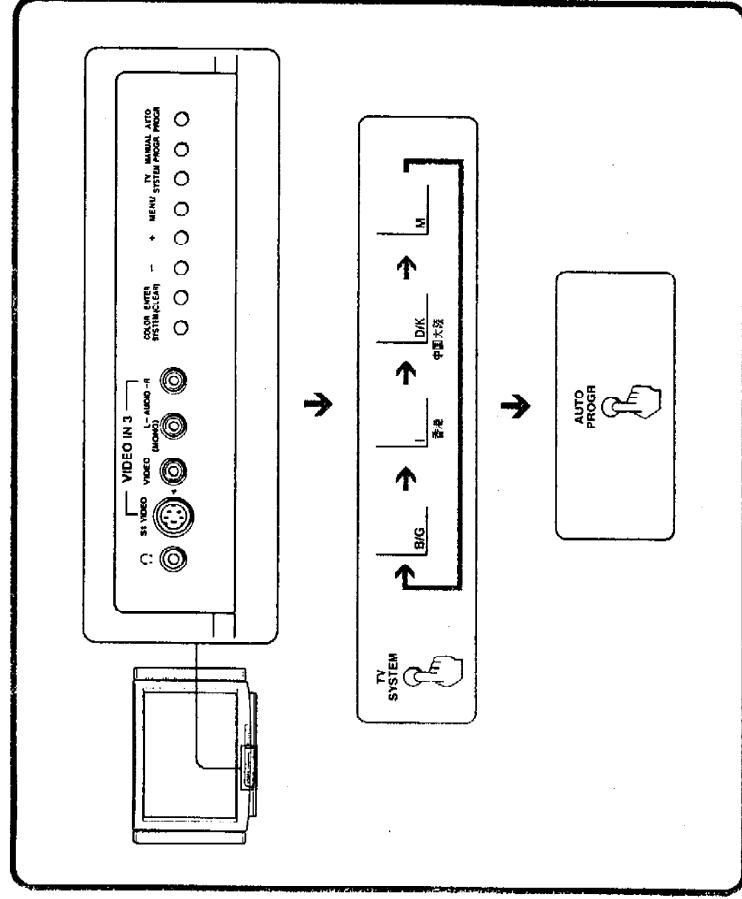
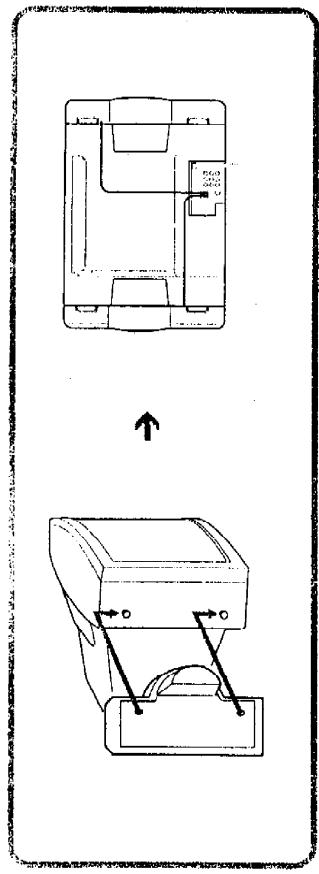
**COMPONENTS IDENTIFIED BY SHADING AND MARK  $\Delta$  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

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## SECTION 1 GENERAL

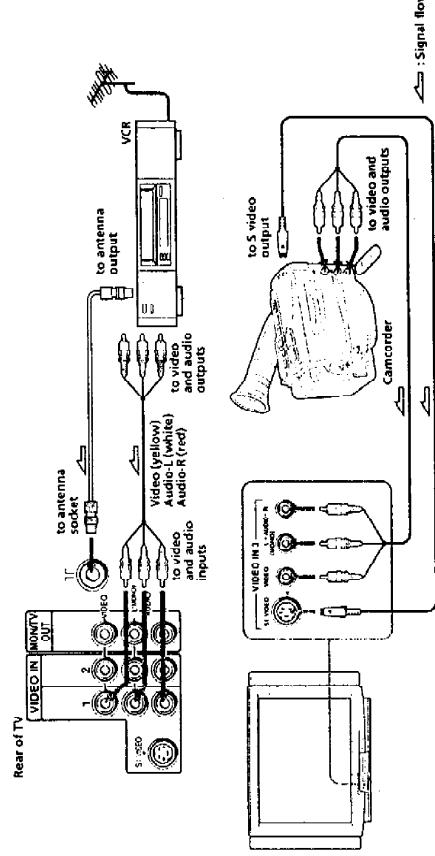
The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.



## Connections

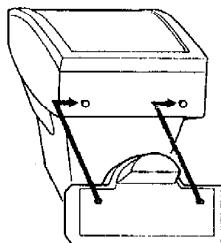
### Connecting optional equipment

You can connect optional audio/video equipment to your TV such as a VCR, multi disc player, camcorder, headphones, or stereo system.



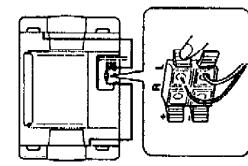
### Connecting the speakers

#### 1 Attach the right and left speakers to the TV.



#### 2 Connect the speaker wires to the EXT SP (8Ω) terminals at the rear of the TV.

The red wire should be connected to the  $\oplus$  red terminals and the black wire to the  $\ominus$  black terminals.

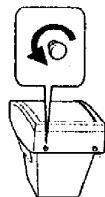


### Detaching the screws from the TV

When connecting other speakers, you can detach the screws from sides of the TV.

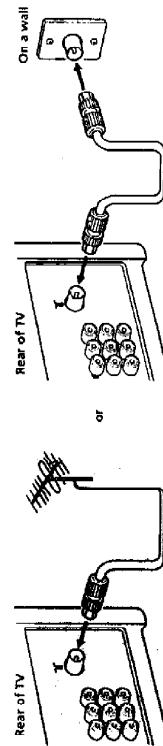
#### Notes

- If you connect larger speakers, they must be rated at 3-ohm impedance with normal power handling capacity of more than 15 W.
- Make sure that none of the speaker wire strands stick out, making contact with the neighbouring speaker terminals, to prevent a malfunction caused by a short circuit of the speaker terminals.
- Unplug the unit from the wall outlet when connecting the speakers.



### Connecting a VHF antenna or a combination VHF/UHF antenna — 75-ohm coaxial cable (round)

Attach an optional IEC antenna connector to the 75-ohm coaxial cable. Plug the connector into the 'T' (antenna) socket at the rear of the TV.



## Presetting channels

### Disabling program positions

By disabling unused or unwanted program positions, you can skip those position when you press PROGR +/-.

### 3 Press AUTO PROGR.



#### To start presetting channels automatically from the specified program position

- 1 Press TV SYSTEM to select your local TV system.
- 2 Press PROGR +/- to select your local TV system.
- 3 Press PROGR +/- to select the program position.
- 4 Press AUTO PROGR.

### Presetting channels automatically

You can preset TV channels easily by storing all the receivable channels automatically. You can also preset channels manually or disable program positions.

### Presetting channels manually

To change the program position for a channel or to receive a channel with a weak signal, preset the channel manually.



### 3 Press TV SYSTEM to select your TV system.

- 2 Press PROGR +/- until the required program position appears on the screen.
- 3 Press TV SYSTEM to select your TV system.

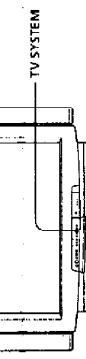
### 4 Press + or - until the required channel picture appears on the screen.

### 5 Press MANUAL PROGR.

**If the TV system is not properly selected**  
The color of the picture may be poor and/or the sound may be noisy. In this case, select the appropriate TV system.

After setting the remote command mode, you can use the following buttons to operate the video equipment.

- 1 Press PROGR +/- to select the program position.
- 2 Press TV SYSTEM until the picture and sound become normal.



### 1 Press MAIN POWER.

When the TV is in standby mode after pressing MAIN POWER, press POWER on the TV or remote commander.



### 2 Press TV SYSTEM to select your local TV system.

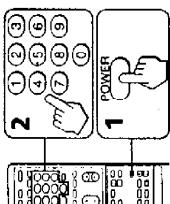


#### Note

- The setting of the TV SYSTEM is memorized for each program position.

### Setting the remote command mode

You can use the supplied remote commander to operate this TV and Sony video equipment, such as a VCR or multi disc player. To operate Sony video equipment, first set the remote command mode for the video equipment you want to use.

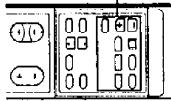


### 1 Press PROGR +/- until the unused or unwanted program position appears on the screen.

### 2 Press the number buttons that correspond to the remote command mode.

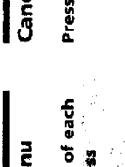
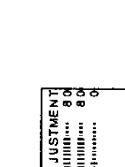
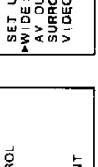
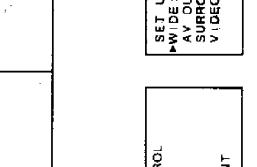
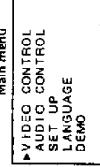
Mode Number	Remote command mode
0 then 1	VTR1 (e.g. Beta format VCR)
0 then 2	VTR2 (e.g. 8 mm format VCR)
0 then 3	VTR3 (e.g. VHS format VCR)
0 then 4	MDP (multi disc player)

After setting the remote command mode, you can use the following buttons to operate the video equipment.



## Introducing the menu

You can use the on-screen menus to set the picture quality, sound, and other settings. You can use buttons on both the remote commander and the TV to operate the menus.



## Changing the menu language

### Getting back to the English menu

1 Press MENU.



2 Press  $\Delta$  + or  $\nabla$  - to move the cursor ( $\blacktriangleright$ ) to the fourth line from the top ("LANGUAGE").



3 Press ENTER.



4 Press  $\Delta$  + or  $\nabla$  - to move the cursor ( $\blacktriangleright$ ) to LANGUAGE.



5 Press MENU to return to the normal screen.



4 Press  $\Delta$  + or  $\nabla$  - to select CHINESE.



5 Press ENTER.



6 Press MENU to return to the normal screen.

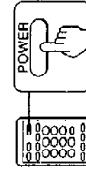


- If more than 60 seconds elapse after you press a button, the menu screen disappears automatically.
- You can display all of the features available for the TV in DEMO mode.

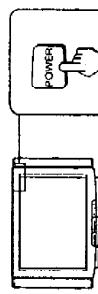
## Watching the TV

### Switching off the TV

To switch off the TV temporarily, press POWER.



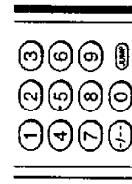
### 1 Press MAIN POWER to turn the TV on.



When the TV is in standby mode after pressing MAIN POWER, press POWER on the TV or remote commander.

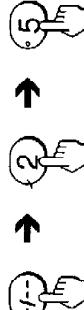
### 2 Select the TV channel you want to watch.

Press a number button.

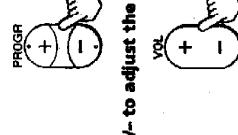


To select a two-digit channel, press “-/-” before the number buttons.  
For example: to select channel 25, press “-/-”, “2”, and “5.”

**To scan through channels**  
Press PROGR +/- until the channel you want appears.

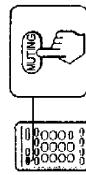


### 3 Press VOL +/- to adjust the volume.



### Muting the sound

Press MUTING.



To switch off the TV completely, press MAIN POWER.  
If the main power is turned off in standby mode, the STANDBY indicator may remain alight for a while.



### Displaying on-screen information

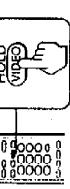
Press DISPLAY/REVEAL.

The program position, local system, and TV settings are displayed on the screen.

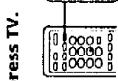


### Watching the video input

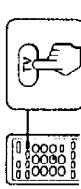
Press VIDEO/HOLD.



► VIDEO 1 ► VIDEO 2 ► VIDEO 3 ► INDEX

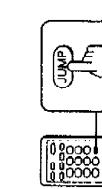


To watch TV, press TV.



### Switching back quickly to the previous channel

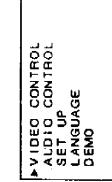
Press JUMP.



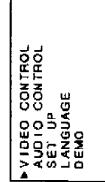
## Adjusting the picture



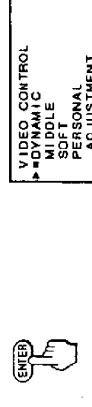
### 1 Press MENU.



### 2 Press △+ or ▽- to move the cursor (►) to VIDEO CONTROL.



### 3 Press ENTER.



### 4 Press △+ or ▽- to select the setting, and press ENTER.

Select	To
DYNAMIC	Display more contrast picture
MIDDLE	Display normal contrast picture
SOFT	Display picture suitable for movies and video games
PERSONAL	Display the picture that is adjusted using ADJUSTMENT
ADJUSTMENT	Make specific adjustments. See "Adjusting the picture setting."

### 5 Press MENU to return to the normal screen.

Operations | 13-EN

## Adjusting the picture setting (ADJUSTMENT)

You can adjust the picture to your own taste with the ADJUSTMENT option. The adjusted settings are stored in the PERSONAL option.

**1** Press MENU.

**2** Press  $\Delta+$  or  $\nabla-$  to move the cursor ( $\blacktriangleright$ ) to VIDEO CONTROL, and press ENTER.

**3** Press  $\Delta+$  or  $\nabla-$  to move the cursor ( $\blacktriangleright$ ) to ADJUSTMENT, and press ENTER.

**4** Press  $\Delta+$  or  $\nabla-$  to move the cursor ( $\blacktriangleright$ ) to the item you want to adjust, and press ENTER.

PERSONAL ADJUSTMENT		
PICTURE	PICTURE	100
COLOR	COLOR	50
BRIGHT	BRIGHT	50
HUE	HUE	0
SHARP	SHARP	70

**5** Press  $\Delta+$  or  $\nabla-$  to adjust the item, and press ENTER.

Item	Press $\Delta+$ to	Press $\nabla-$ to
PICTURE	Increase Picture contrast	Decrease picture contrast
COLOR	Increase color intensity	Decrease color intensity
BRIGHT	Brighten the picture	Darken the picture
HUE	Make skin tones become reddish	Make skin tones become greenish
SHARP	Sharpen the picture	Soften the picture

**6** To adjust other items, repeat steps 4 and 5.

**7** Press MENU to return to the normal screen.

**Note**

- You can adjust HUE for NTSC color system only.

## Adjusting the sound setting (ADJUSTMENT)

You can adjust the sound to your own taste with the ADJUSTMENT option. The adjusted settings are stored in the PERSONAL option.

**1** Press MENU.

**2** Press  $\Delta+$  or  $\nabla-$  to move the cursor ( $\blacktriangleright$ ) to AUDIO CONTROL, and press ENTER.

**3** Press  $\Delta+$  or  $\nabla-$  to move the cursor ( $\blacktriangleright$ ) to ADJUSTMENT, and press ENTER.

**4** Press  $\Delta+$  or  $\nabla-$  to move the cursor ( $\blacktriangleright$ ) to the item you want to adjust, and press ENTER.

PERSONAL ADJUSTMENT		
BASS	BASS	100
TREBLE	TREBLE	100
BALANCE	BALANCE	0

**5** Press  $\Delta+$  or  $\nabla-$  to adjust the item, and press ENTER.

AUDIO CONTROL		
VIDEO CONTROL	VIDEO CONTROL	
AUDIO CONTROL	AUDIO CONTROL	
SET UP	SET UP	
LANGUAGE	LANGUAGE	
DENO	DENO	

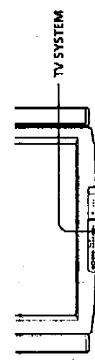
AUDIO CONTROL		
MUSIC	MUSIC	
NEWS	NEWS	
STANDARD	STANDARD	
PERSONAL	PERSONAL	
ADJUSTMENT	ADJUSTMENT	

**6** To adjust other items, repeat steps 4 and 5.

**7** Press MENU to return to the normal screen.

**If the sound is distorted or noisy**

When receiving programs through the "T" terminal:  
Press TV SYSTEM until the sound becomes clear.



**4** Press  $\Delta+$  or  $\nabla-$  to select the sound that you want, and press ENTER.

Select	To	
MUSIC	Listen to music programs.	
NEWS	Listen to news program. A person's voice can be heard clearly.	
STANDARD	Listen to sound other than music or news.	
PERSONAL	Listen to the sound that is adjusted using ADJUSTMENT.	
ADJUSTMENT	Make specific settings. See "Adjusting the sound setting."	

**5** Press MENU to return to the normal screen.

## Selecting a stereo or bilingual program

### Receiving area for NICAM programs

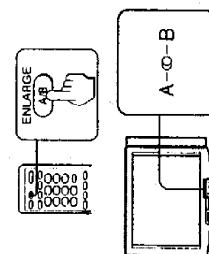
System	Receiving area
NICAM	Hong Kong, Singapore, New Zealand, etc.
A2 (German)	Australia, Malaysia, Thailand, etc.

### Notes

- If the signal is very weak, the sound becomes monaural.
- If the stereo sound is noisy, select "regular" or "mono". The sound becomes monaural, however, the noise will be reduced.

You can enjoy stereo sound or bilingual program of NICAM and A2 (German) systems. The initial setting is stereo sound.

**Press A/B/ENLARGE repeatedly until you receive the sound you want.**  
The sound changes and the corresponding indicator lights up as follows:



When receiving a NICAM program:

Broadcasting	On-screen display	Selected sound (indicator)
NICAM stereo	NICAM	Stereo → Regular (A and B)
NICAM bilingual	NICAM	→ A → B → Regular (A) (B)
NICAM monaural	NICAM	Monaural → Regular (A)

When receiving a A2 (German) program:

Broadcasting	On-screen display	Selected sound (indicator)
A2 (German) stereo	STEREO	Stereo (A and B)
A2 (German) bilingual	—	→ A → B → A → B (A) (B) (A and B)

## Watching two pictures simultaneously

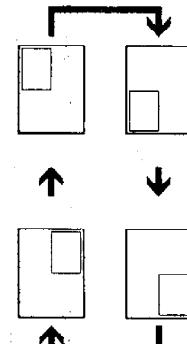
### Swapping pictures between the main and PIP screens

Press SWAP.



### Changing the position of the PIP screen

Press POSITION.



### Freezing the PIP screen

Press FREEZE.

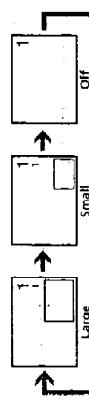
To restore the normal picture, press FREEZE again.

### Notes

- When you display a VCR picture on the PIP screen at a speed other than normal speed, the picture may be noisy depending on the VCR. The picture can be improved by selecting the smaller size of the PIP screen.
- If you display different color systems (PAL, PAL 60, SECAM, NTSC) on the main screen and the PIP screen, the size of the PIP screen may be different and the PIP picture may be noisy. This is not caused by the malfunction of the TV.

## Displaying PIP

Press PIP.



### Selecting a TV program or video in the main screen

To select a TV program, press TV and select the channel.

To select a video, press VIDEO/HOLD to select a video input.

### Selecting a TV program or video in the PIP screen

To select a TV program, press TV/VIDEO to select TV screen.  
To select the channel.  
To select a video, press TV/VIDEO to select a video input.

- Note**
- To enjoy two different TV programs simultaneously, you need another equipment with built-in tuner, etc. (e.g., VCR with tuner, satellite tuner, etc.).

## Viewing Teletext

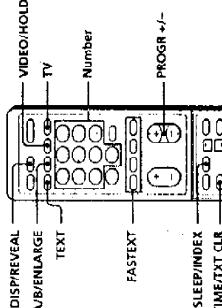
### Revealing concealed information

Sometimes pages contain concealed information such as an answer to a quiz. The reveal option lets you disclose the information.

#### Press SLEEP/INDEX to display an overview of the Teletext contents and page numbers.

### Using FASTEXT

This feature allows you to quickly access a Teletext page that uses FASTEXT. When a FASTEXT page is broadcast, a color-coded menu appears at the bottom of the screen. The colors of the menu correspond to the RED, GREEN, YELLOW, and CYAN buttons on the remote commander. These color buttons function as the FASTTEXT buttons in Teletext mode.



### Selecting a Teletext page

To input the three-digit page number of the Teletext page, press the number buttons.  
If you make a mistake, key in the correct page number again.

To access the next or previous page, press PROGR +/-.

### Displaying Teletext

1 Select a TV channel which carries the Teletext broadcast you want to watch.

2 Press TEXT to display the Teletext. A Teletext page is displayed (normally the index page). If there is no Teletext broadcast, P100 is displayed at the top left corner of the screen. To cancel the Teletext display, press TV.

**Superimposing a Teletext page on the TV picture**  
Press TEXT. Each time you press TEXT, the screen changes as follows:

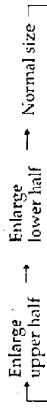


## Customizing the TV (SET UP)

### Enlarging the Teletext display

#### Press A/B/ENLARGE.

Each time you press A/B/ENLARGE, the Teletext display changes as follows:



### Waiting for a Teletext page while watching a TV program (TEXT CLEAR)

1 Key in the page number of the Teletext that you want to refer, then press TIME/TXT CLR.

2 When the page number is displayed on the screen, press TEXT to switch the Teletext on.

### Turning wide mode

When receiving the signal conforming to wide mode (S1-Video signal), you can change the size of the picture on the screen.

#### 1 Press MENU.

#### 2 Press $\Delta+$ or $\nabla-$ to select SET UP, and press ENTER.

#### 3 Press $\Delta+$ or $\nabla-$ to select WIDE, and press ENTER.

4 Press  $\Delta+$  or  $\nabla-$  to select the wide mode to suit the size of the picture you want to display on the TV screen.

Select \_\_\_\_\_ To \_\_\_\_\_  
CN Display the picture on the screen in wide mode  
AUTO Display the picture on the screen in wide mode automatically when receiving the S1-Video signal through the S-Video input jack  
OFF Display the picture on the screen in conventional size

#### Note

- When the picture is in wide mode, the bright lines which are used for adjusting the CRT at optimum level appear at the top of the screen.

### Press VIDEO/HOLD

The HOLD symbol "H" is displayed at the top left corner of the screen.

#### To resume normal Teletext operation, press TEXT.

### Press TEXT.

Each time you press TEXT, the screen changes as follows:



## Troubleshooting

### Selecting the surround sound

You can enjoy a surround sound effect that is like being in a music hall when receiving stereo signals.

- 1 Press MENU.
- 2 Press  $\Delta+$  or  $\nabla-$  to select SET UP, and press ENTER.

SET UP	OFF
► WIDE	MONITOR
AV OUT:	SURROUND: OFF
VIDEO:	NR: OFF
VIDEO VR:	OFF

- 3 Press  $\Delta+$  or  $\nabla-$  to select SET UP, and press ENTER.
- 4 Press  $\Delta+$  or  $\nabla-$  to select the output signal, and press ENTER.

SET UP	OFF
► WIDE	MONITOR
AV OUT:	SURROUND: OFF
VIDEO:	NR: OFF
VIDEO VR:	OFF

- 5 Press  $\Delta+$  or  $\nabla-$  to select AV OUT, and press ENTER.

Select	To
TV	Output the TV signal.
MONITOR	Output the signal of the picture you are watching as a monitor.

Note

- Do not change the channel while recording with a VCR through the MONITOR jacks. If you change the channel, it also changes the channel you are recording.

### Reducing the noise of the picture

You can reduce the noise level of the picture when the TV receives a weak signal or when you play a videotape that is in poor condition.

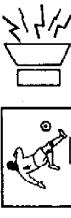
- 1 Press MENU.

- 2 Press  $\Delta+$  or  $\nabla-$  to select SET UP, and press ENTER.

SET UP	OFF
► WIDE	MONITOR
AV OUT:	SURROUND: OFF
VIDEO:	NR: OFF
VIDEO VR:	OFF

- 3 Press  $\Delta+$  or  $\nabla-$  to select VIDEO NR, and press ENTER.
- 4 Press  $\Delta+$  or  $\nabla-$  to turn the noise reduction on or off, and press ENTER.

### Good picture Noisy sound



→ Check the TV SYSTEM setting.

### No picture No sound



→ Check the MAIN POWER.  
→ Press POWER.  
→ Check the antenna connection.  
→ Check the VCR connections.

### Good picture No sound



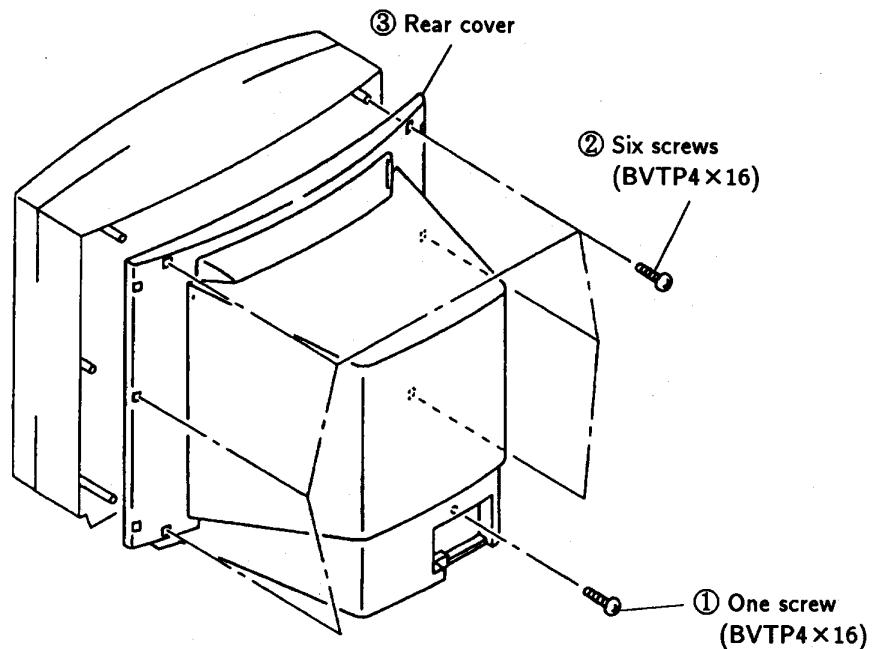
→ Check the antenna connection.  
→ Check the VCR connections.  
→ Even if the picture or the sound is normal, changes in the room temperature sometimes make the TV cabinet expand or contract, making a noise. This does not indicate a malfunction.

### TV cabinet creaks

→ This may be caused by reflections from nearby mountains or buildings. A highly directional antenna may improve the picture.

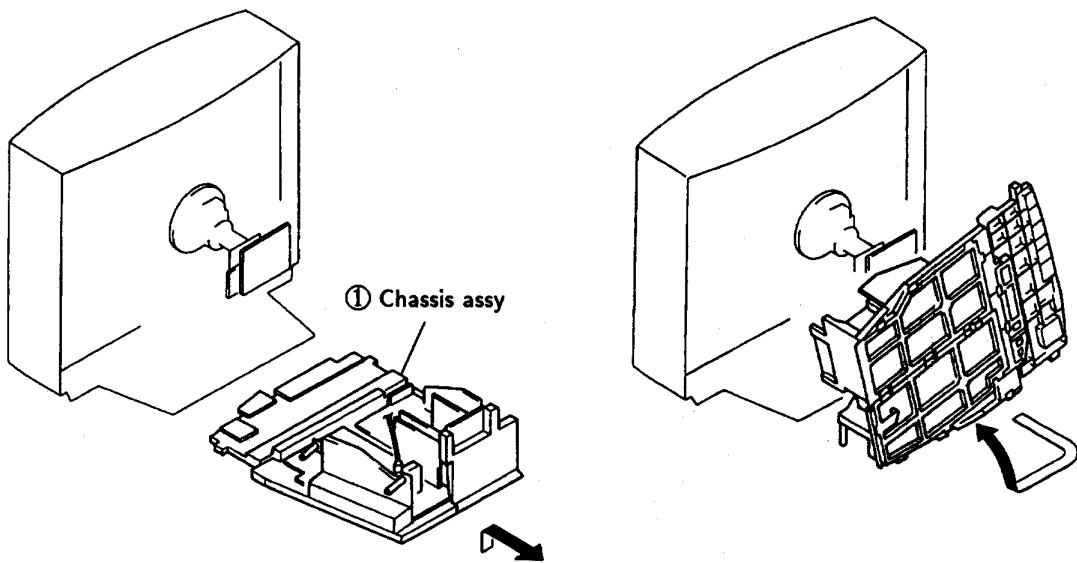
## SECTION 2 DISASSEMBLY

### 2-1. REAR COVER REMOVAL

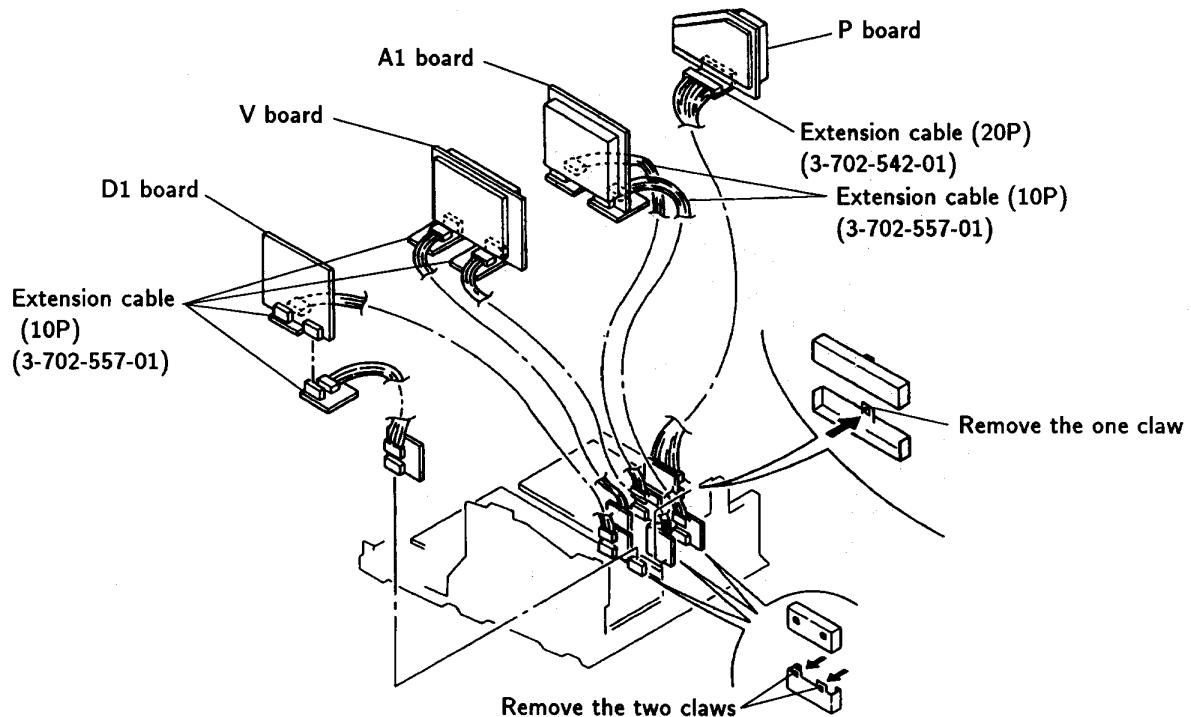


### 2-2. CHASSIS ASSY REMOVAL

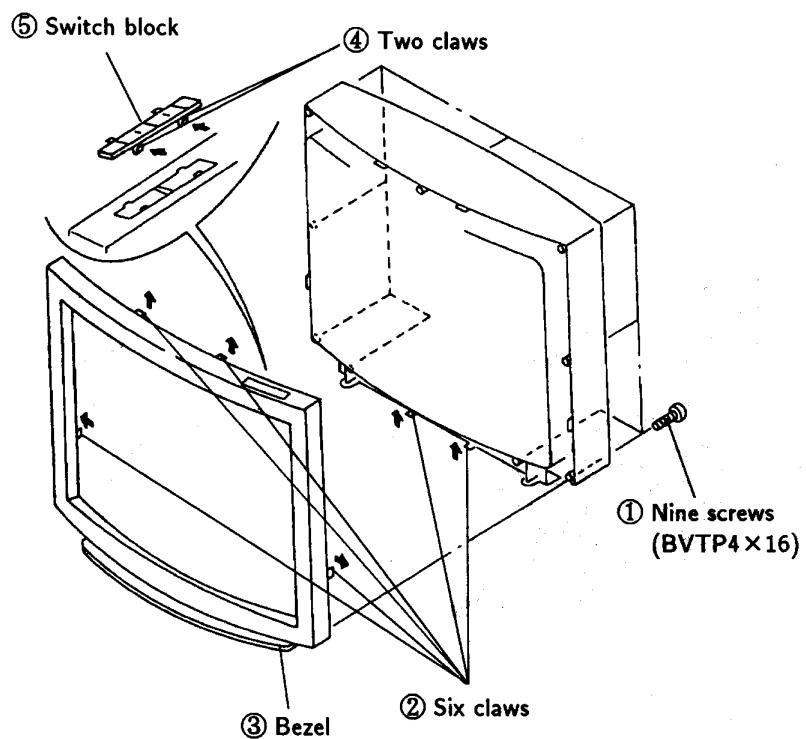
### 2-3. SERVICE POSITION



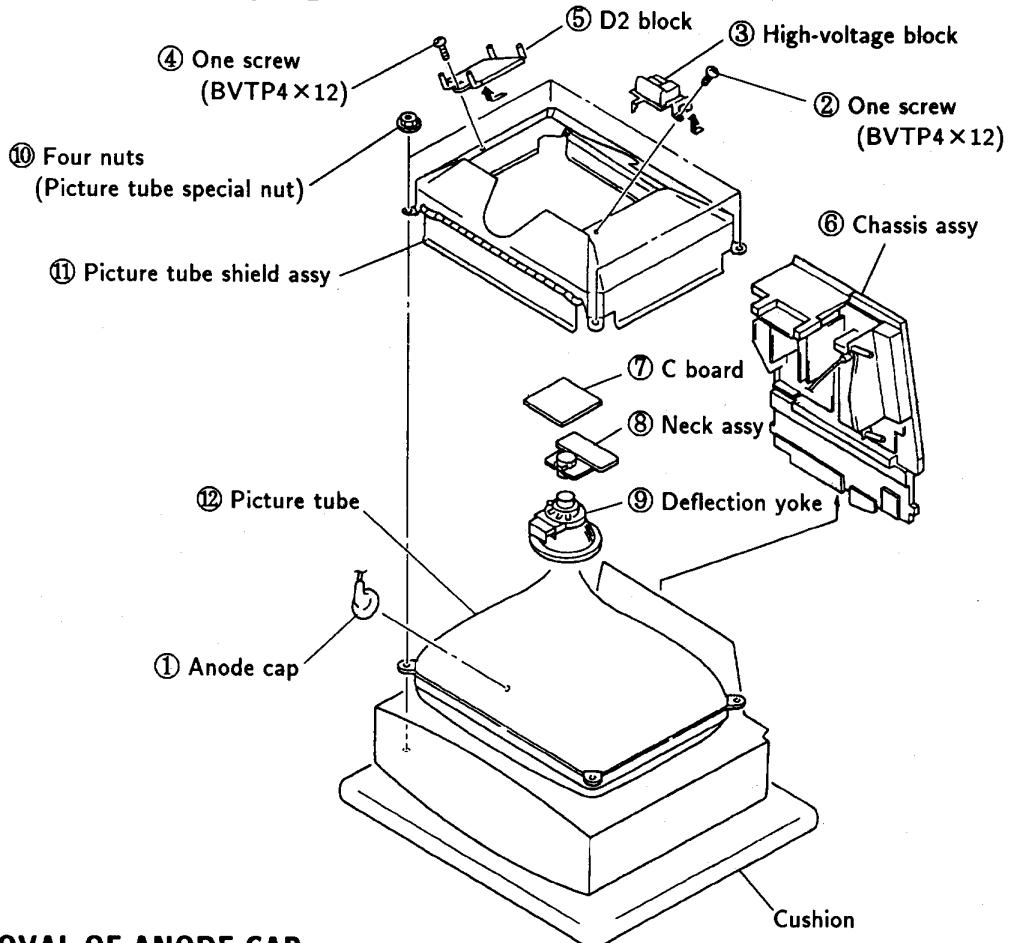
## 2-4. EXTENSION CABLE



## 2-5. SWITCH BLOCK REMOVAL



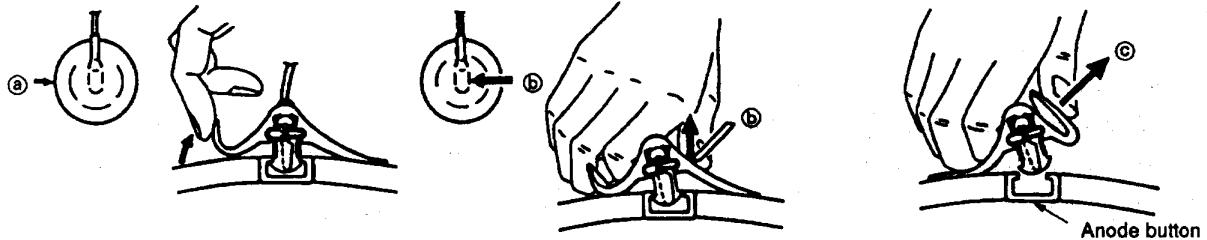
## 2-6. PICTURE TUBE REMOVAL



### • REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

### • REMOVING PROCEDURES



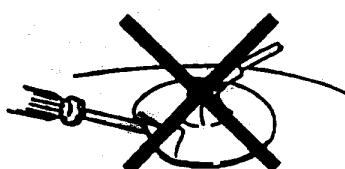
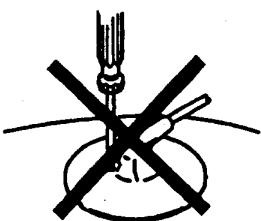
① Turn up one side of the rubber cap in the direction indicated by the arrow ③.

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ④.

③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⑤.

### • HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber too hard in order not to hurt inside of anode-caps!  
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hard!  
The shatter-hook terminal will stick out or hurt the rubber.



## SECTION 3

### SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted. Controls and switch should be set as follows unless otherwise noted:
 

PICTURE control .....	RESET
BRIGHTNESS control .....	CENTER

#### Preparations:

- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

#### 3-1. BEAM LANDING

- Input the white signal with the pattern generator.

Contrast      } normal  
 Brightness

- Position neck ass'y as shown in Fig 3-2.
- Set the pattern generator raster signal to red.
- Move the deflection yoke to the rear and adjust with the purity control so that the red is at the center and the blue and the green take up equally sized areas on each side.

(See Figures 3-1 through 3-3.)

- Move the deflection yoke forward and adjust so that entire screen is red. (See Figure 3-1.)
- Switch the raster signal to blue, then to green and verify the condition.
- When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
- If the beam does not land correctly in all the corners, use a magnet to adjust it.

(See Figure 3-4.)

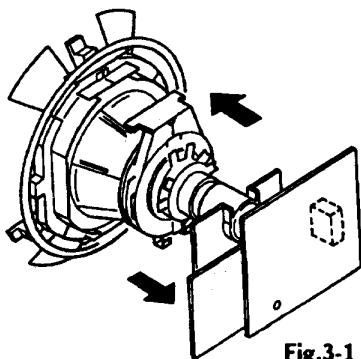


Fig.3-1

Perform the adjustments in order as follows :

- Beam Landing
- Convergence
- Focus
- White Balance

**Note : Test Equipment Required.**

- Color-bar/Pattern Generator
- Degausser
- Oscilloscope

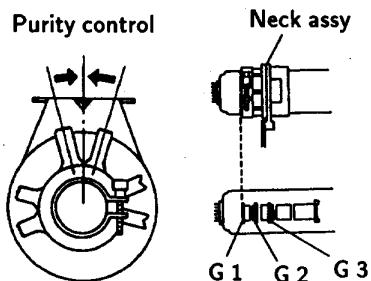


Fig.3-2

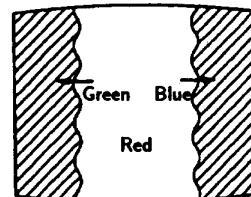


Fig.3-3

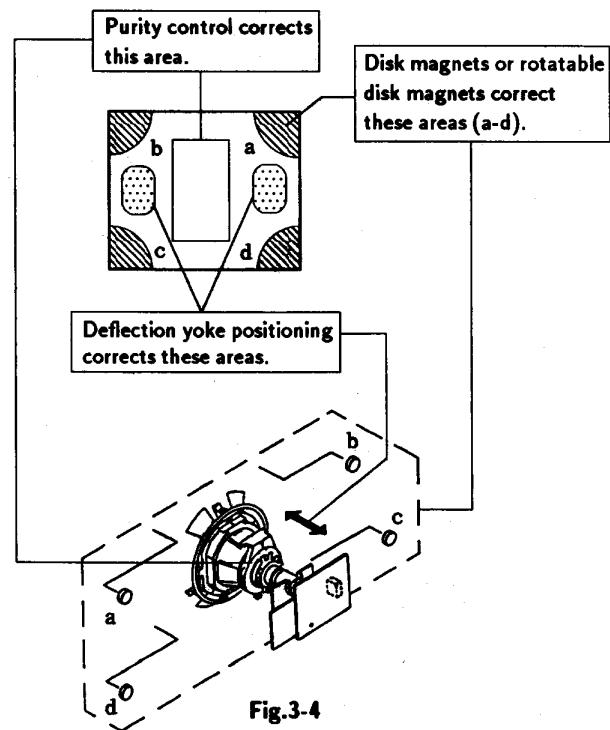


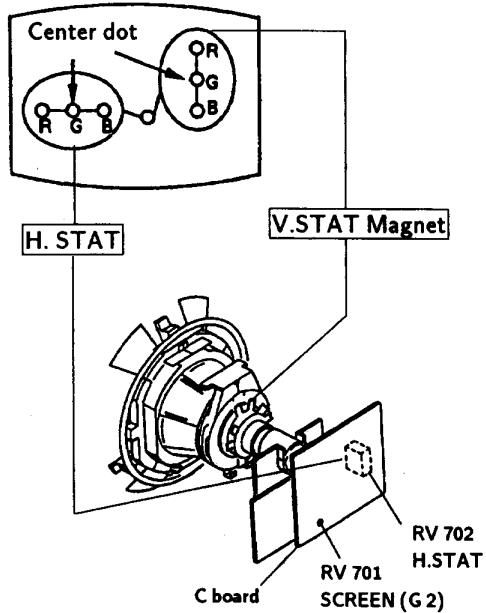
Fig.3-4

### 3-2. CONVERGENCE

#### Preparation :

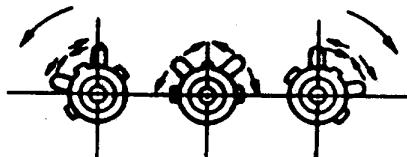
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

#### (1) Horizontal and Vertical Static Convergence

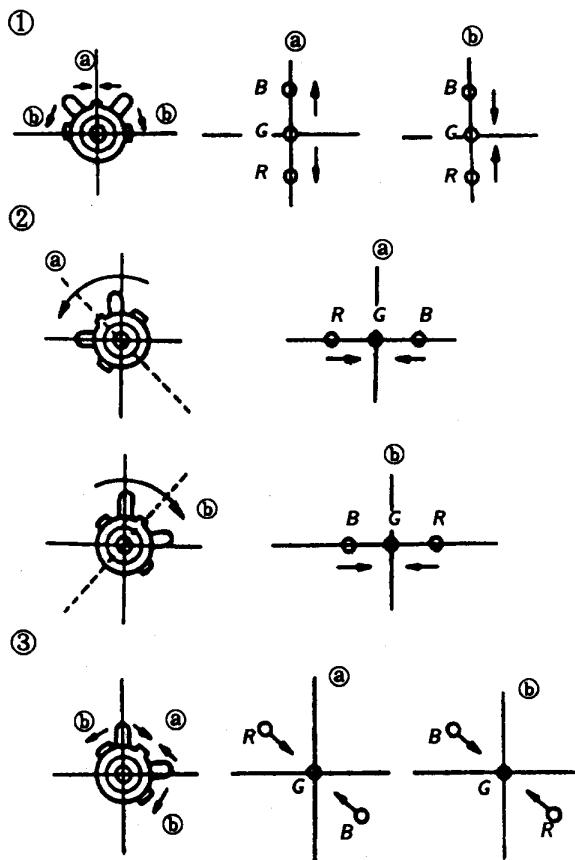


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V. STAT magnet in the manner given below.  
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

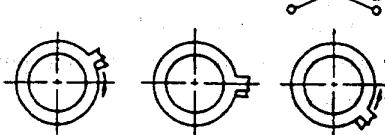
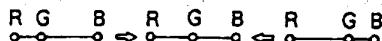
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



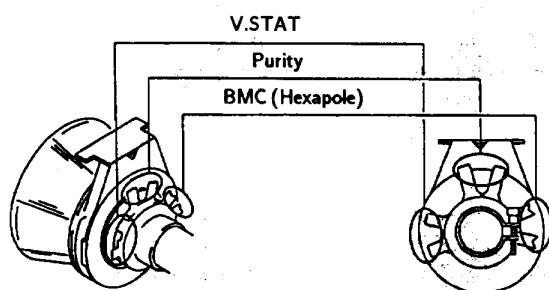
4. If the V.STAT magnet is moved in the direction of the ② and ③ arrows, the red, green, and blue points move as shown below.



- Operation of BMC (Hexapole) Magnet



- The respective dot positions resulting from moving each magnet interact, so be sure to perform adjustment while tracking.  
Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).



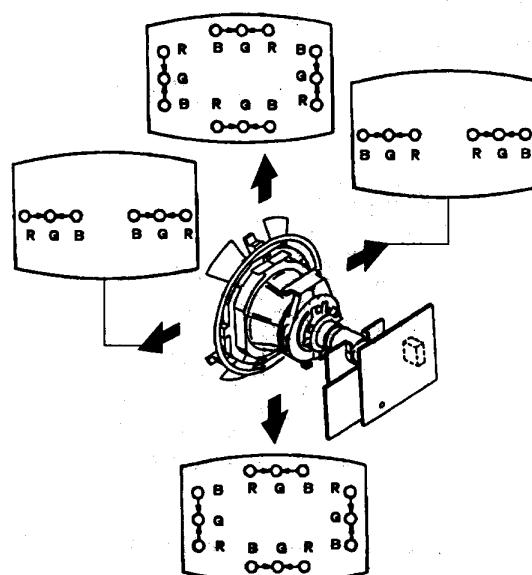
- Y separation axis correction magnet adjustment

1. Receive the cross-hatch signal, and adjust [PIC] to "MIN" and [BRT] to "standard".
2. Adjust the deflection yoke to the upright condition when it hits the CRT.
3. Adjust so that the Y separation axis correction magnet on the neck assembly is symmetrical at the top and bottom (open state).
4. Return the deflection yoke to its original position.

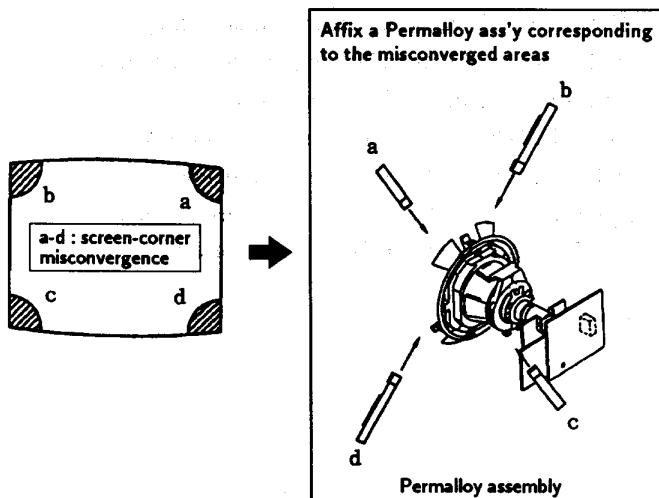
## (2) Dynamic Convergence Adjustment

### Preparations:

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.
- 1. Slightly loosen the deflection yoke screws.
- 2. Remove the deflection yoke spacer.
- 3. Move the deflection yoke as shown in the figure below and optimize the convergence.
- 4. Tighten the deflection yoke screws.
- 5. Install the deflection yoke spacer.

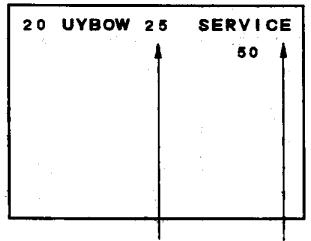
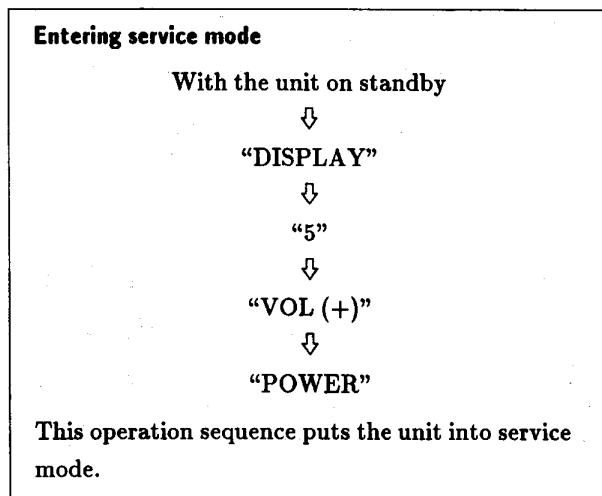


## (3) Screen-corner Convergence

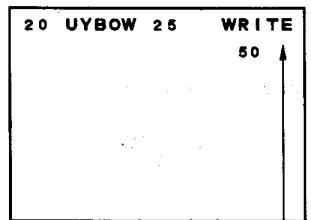


#### (4) Dynamic convergence adjustment

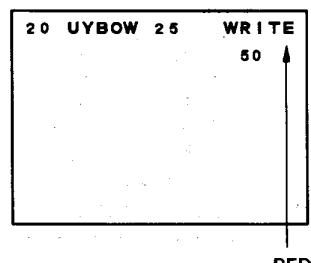
1. Adjust horizontal convergence located at the center position of the screen with H STAT VR.
2. Dynamic convergence adjustments are made with the RM-821 that comes with this unit.



Adjusted with "3"  
and "6" buttons GREEN

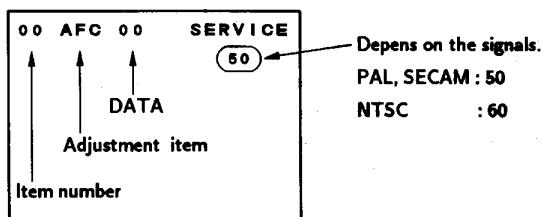


Written with "MUTE"



RED

The screen display is :



"1", "4"	Raise/lower the service item number
"3", "6"	Raise/lower the data
"MUTE"	Writes
"0"	Executes the writing

Item Number 20

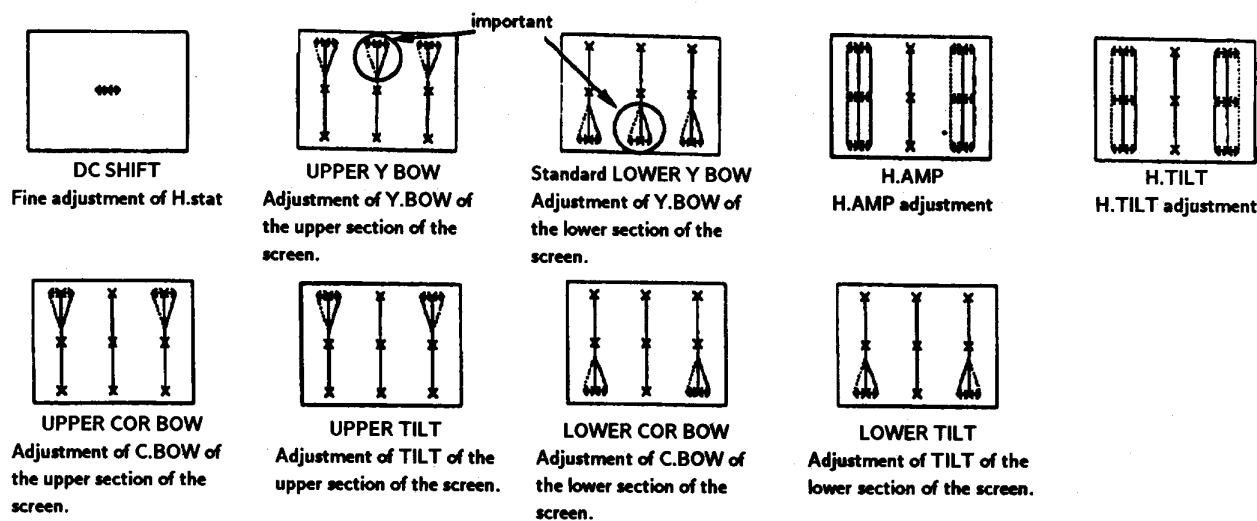
This explanation uses UYBOW as an example.

1. Select 20 UYBOW with the "1" and "4" buttons.
2. Raise/lower the data with the "3" and "6" buttons.
3. Select the optimum state.
4. Write with the MUTE button. (The display changes to blue WRITE.)
5. Execute the writing with the "0" button. (The WRITE display changes briefly to red.)

"1", "4"	Select the adjustment item.
"3", "6"	Raise/lower the data.
"MUTE"	Writes.
"0"	Executes the writing.

Item number	Adj. Item	Data range	Standard DATA 50 Hz/60 Hz		Note	Device
			Normal	Wide		
4C	DCS	00~3 F	1 F	1 F	DC Shift	(CXA1526P)
4D	UYB	00~3 F	1 F	1 F	Upper Y Bow	(CXA1526P)
4E	LYB	00~3 F	1 F	1 F	Lower Y Bow	(CXA1526P)
4F	HAP	00~3 F	1 F	1 F	H. Amp	(CXA1526P)
50	HTL	00~3 F	1 F	1 F	H. Tilt	(CXA1526P)
51	UCB	00~3 F	1 F	1 F	Upper Corner Bow	(CXA1526P)
52	UTL	00~3 F	1 F	1 F	Upper Tilt	(CXA1526P)
53	LCB	00~3 F	1 F	1 F	Lower Corner Bow	(CXA1526P)
54	LTL	00~3 F	1 F	1 F	Lower Tilt	(CXA1526P)

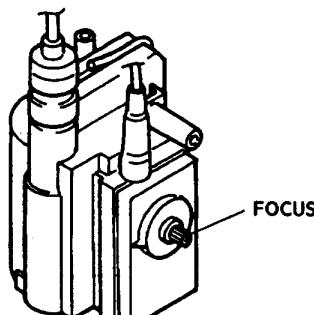
**R.G.B.dots movement on the screen of the set**



At this time, H.TILT, H.AMP, UPPER TILT, UPPER COR, BOW, LOWER TILT, and LOWER COR, BOW look like all the same, but the movement of the right and left dots are reverse in all the TILT system. (Pay attention to the dotted lines.)

### 3-3. FOCUS ADJUSTMENT

Adjust FOCUS control on the flyback transformer for a best focus.

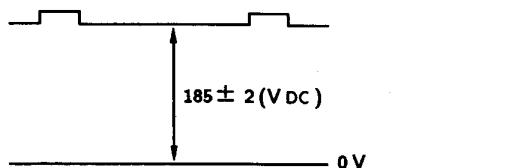


FLYBACK TRANSFORMER (T801)

### 3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

#### (1) G2 (SCREEN) ADJUSTMENT (RV701)

1. Set the PICTURE and BRIGHTNESS to normal.
2. Put to VIDEO input mode without signals.
3. Set to Service Mode.
4. Change BLU data of the item number "58" from "01" to "00". (To turn off Blue Black.)
5. Press **MUTE**, and **0** to write the data in the memory.
6. Connect R, G, and B of the C board cathode to the oscilloscope.
7. Adjust G2 (RV701) volume to the value below.



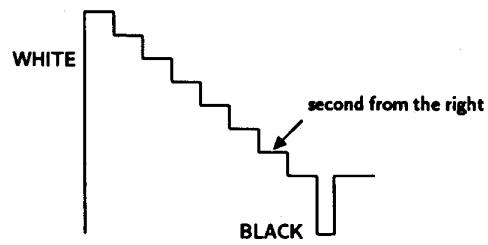
8. Re-set BLU data of the item number "58" from "00" back to "01".
9. Press **MUTE**, and **0** to write the data in the memory.

#### (2) WHITE BALANCE ADJUSTMENTS

1. Set to service mode.
2. Input an entire white signal.
3. Set the PICTURE to minimum.
4. Select SBR (05) with **1** and **4**, and then set the level to minimum with **3** and **6**.
5. Select GCT (09) and BCT (0A) with **1** and **4**. And adjust the level with **3** and **6** for the best white balance.
6. Set the PICTURE to maximum.
7. Select GDR (07) and BDR (08) with **1** and **4** and adjust the level with **3** and **6** for the best white balance.
8. Write into the memory by pressing **MUTE** → then **0**.

#### (3) SUB BRIGHT ADJUSTMENT

1. Set to service mode.
2. Input a staircase signal of black and white from the pattern generator.
3. BRIGHTNESS ⋯ RESET  
PICTURE ..... minimum
4. Select SBR with **1** and **4**, and adjust SBR level with **3** and **6** so that the stripe second from the right is dimly lit.



## **SECTION 4** **SELF DIAGNOSIS FUNCTION**

If no acknowledgement is returned from a device which is turned "ON", the device has a problem.  
In this case, one of the LED's responding to the problem device will flicker defined number of times.

Flickering is operated by lighting the LED's for 60ms and turning them off for 600ms.

The flickering frequency responding to each failed device is shown below.

<b>Device</b>	<b>NONVOLATILE MEMORY</b>	<b>AV SWITCH (CXA1545S)</b>	<b>MAIN Y/C (TDA9145)</b>	<b>RGB JUNGLE (CXA1587)</b>	<b>DY DSP (CXD2018)</b>	<b>SURROUND PROCESSOR (TA8776N)</b>
<b>Flickering Frequency</b>	1	2	3	4	5	6

All the devices are checked one after another from the left on the table.

If an error is found, the responding LED will start flickering.

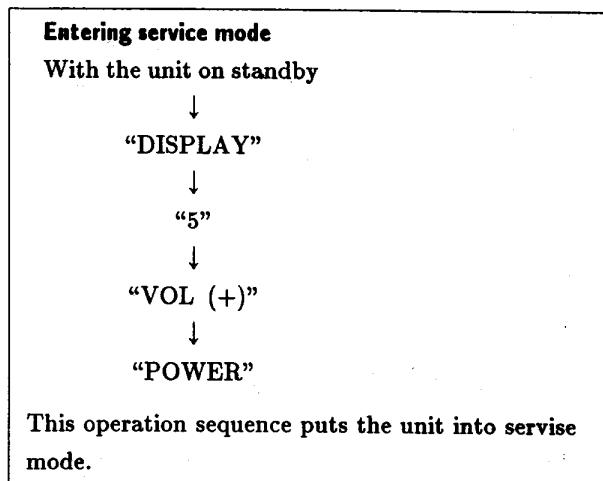
So, if more than 2 devices are failed, the one on the left side will start flickering first.

## SECTION 5

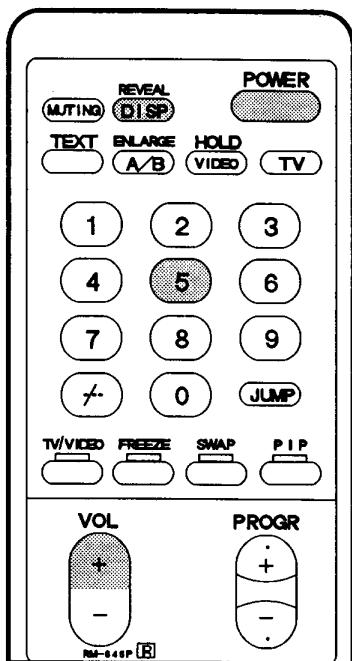
### CIRCUIT ADJUSTMENTS

#### 5-1. ADJUSTMENTS WITH COMMANDER

Service adjustments are made with the RM-845 P that comes with this unit.

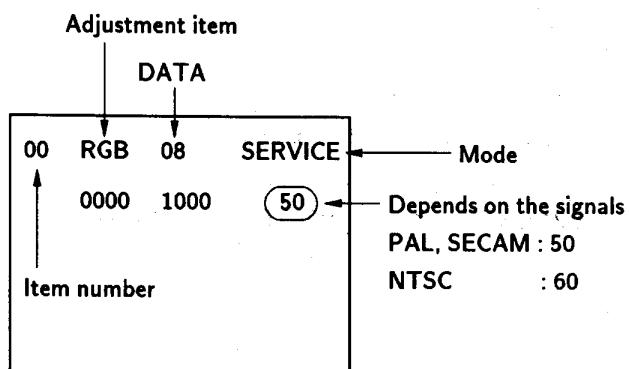


"1", "4"	Raise/lower the service item number
"3", "6"	Raise/lower the data
"MUTE"	Writes
"0"	Executes the writing
"7", "0"	The data all becomes the values in memory
"8", "0"	User control all goes to the standard state
"9"	H-FRE automatic adjustment
"5", "0"	Service data initialization (Besure not to use usually.)
"2", "0"	Write 50Hz adjustment data to 60Hz, or vice versa.



RM-845P

The screen display is :



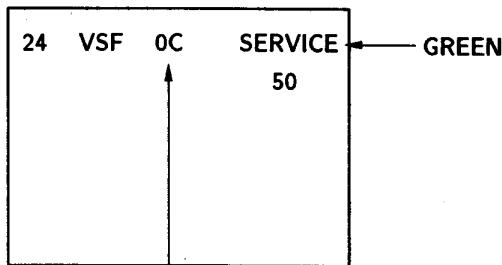
"1", "4"	Select the adjustment item.
"3", "6"	Raise/lower the data.
"MUTE"	Writes
"0"	Executes the writing.

## 5-2. ADJUSTMENT METHOD

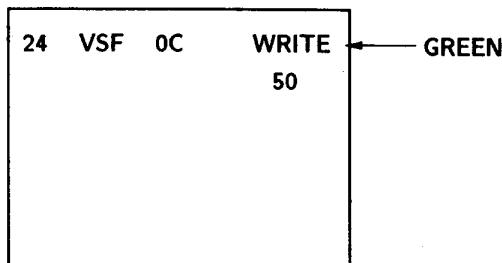
Item Number 24

This explanation uses V-SHFT as an example.

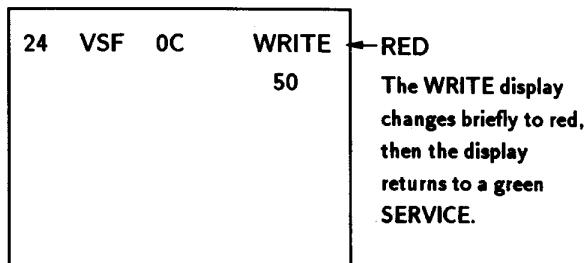
1. Select 24 V-SHFT with the "1" and "4" buttons.
2. Raise/lower the data with the "3" and "6" buttons.
3. Select the optimum state. (The standard is for OF PAL reception.)
4. Write with the MUTE button. (The display changes to blue WRITE.)
5. Execute the writing with the "0" button. (The WRITE display changes briefly to red.)



Adjusted with "3" and "6" buttons



Written with "MUTE"



Written executed with "0"

Use the same method for Items Number 00-5E. Use "1" and "4" to select the adjustment item, use "3" and "6" to adjust, write with "MUTE", then execute the write with "0".

**Note :** In "WRITE", the data of all items are wrote together to memory.

- H-FRE can be adjusted automatically. Feed a standard signal and input "9", the automatic adjustment is executed.
- As for V-FREQ, by searching the bolded screen V range with adjusting data.

**Note :** In item 02 50Hz, or item 03 60Hz, it operates normally in spite of the 50Hz or the 60Hz of the input signal. Therefore be sure to adjust data according to the input signal.

Item number	Adjustment Item	Data range	Standard DATA				Note	Device		
			50 Hz		60 Hz					
			Normal	Wide	Normal	Wide				
00	RGB	00~0F	07	07	07	07	RGB PICTURE	(CXA1587S)		
01	SCN	00~0F	08	06	08	06	SUB-Contrast	(CXA1587S)		
02	VM	00~03	02	02	02	02	VM Level	(CXA1587S)		
03	SCL	00~0F	08	07	08	07	SUB-COLOR	(CXA1587S)		
04	SHU	00~0F	08	08	08	08	SUB-HUE	(CXA1587S)		
05	SBR	00~3F	1F	1F	1F	1F	SUB-BRIGHTNESS	(CXA1587S)		
06	ABL	00~03	03	03	03	03	ABL Mode	(CXA1587S)		
07	GDR	00~3F		1F			G Drive	(CXA1587S)		
08	BDR	00~3F		1F			B Drive	(CXA1587S)		
09	GCT	00~0F			07		G CUT-OFF	(CXA1587S)		
0A	BCT	00~0F			07		B CUT-OFF	(CXA1587S)		
0B	AKR	00~FF			7F		AKB OFF R CUT-OFF	(CXA1587S)		
0C	AKG	00~FF			7F		AKB OFF G CUT-OFF	(CXA1587S)		
0D	AKB	00~FF			7F		AKB OFF B CUT-OFF	(CXA1587S)		
			50 Hz		60 Hz					
0E	GMA	00~0F	0C		0C		$\gamma$ control	(CXA1587S)		
0F	DCT	00~03	00		00		DC TRAN	(CXA1587S)		
10	DPI	00~03	03		03		D-PIC	(CXA1587S)		
11	YFI	00~3F	22		22		Y Filter Adjust	(CXA1587S)		
12	SHL	00~01	01		01		SHP-LIM	(CXA1587S)		
13	YDL	00~0F	07		07		Y Delay Time	(CXA1587S)		
14	YSW	00~03	01		01		Y-SW OUT	(CXA1587S)		
15	HSH	00~3F	23		2A		H Shift	(CXA1587S)		
			5 T	5 V	6 T	6 V				
16	POV	00~0F	08	08	08	08	Pre-Over	(CXA1587S)		
17	SHF	00~03	02	02	02	02	SHP-F 0	(CXA1587S)		
18	SSH	00~03	01	02	02	03	SUB-Sharpness	(CXA1587S)		
19	RMT	00~01		00			R-Mute	(CXA1587S)		
1A	GMT	00~01		00			G-Mute	(CXA1587S)		
1B	BMT	00~01		00			B-Mute	(CXA1587S)		
1C	AG 1	00~01		00			Aging 1 (White)	(CXA1587S)		
1D	AKF	00~01		00			AKB-OFF	(CXA1587S)		
			TV		Video					
1E	SMD	00~01	00		00		Scan Mode	(CXA1587S)		
1F	VEX	00~01	00		00		V-Extension	(CXA1587S)		
20	AFC	00~03	03		03		AFC Loop Gain	(CXA1587S)		
21	AFF	00~01	00		00		AFC-OFF	(CXA1587S)		
22	RFP	00~01	00		00		Reference Position	(CXA1587S)		
23	VSZ	00~3F	1E	1E	1A	1A	V-Size	(CXD2018Q)		
24	VSF	00~3F	2E	2E	32	32	V-Shift	(CXD2018Q)		
25	SCR	00~F	08	08	08	08	S-Correction	(CXD2018Q)		
26	VLN	00~F	08	08	08	08	V-Linearity	(CXD2018Q)		
27	HSZ	00~3F	0C	0C	0E	0E	H-Size	(CXD2018Q)		
28	PAP	00~3F	2E	2E	2E	2E	Pin-Amp	(CXD2018Q)		
29	TLT	00~0F	09	09	09	09	Tilt	(CXD2018Q)		
2A	UCP	00~0F	0A	0A	0A	0A	Upper Corner Pin	(CXD2018Q)		
2B	LCP	00~0F	0C	0C	0C	0C	Lower Corner Pin	(CXD2018Q)		
2C	VBW	00~0F	08	08	08	08	V-Bow	(CXD2018Q)		
2D	VAG	00~0F	08	08	08	08	V-Angle	(CXD2018Q)		
2E	HVV	00~07	04	04	04	04	HV-Comp-V	(CXD2018Q)		
2F	Hvh	00~07	00	00	00	00	HV-Comp-H	(CXD2018Q)		
30	FCL	00~07		03			Frame Color	(SDA 9188)		
31	FON	00~01		01			Frame ON	(SDA 9188)		
			50 Hz		60 Hz					
32	DLY	00~07	00		00		Select Delay LL 3 P	(SDA 9188)		
33	P-V	00~0F	07		07		V read delay	(SDA 9188)		
34	PVS	00~07	04		04		PIP-V offset	(SDA 9188)		
35	P-H	00~3F	0A		07		H read delay	(SDA 9188)		
36	PHS	00~0F	04		03		PIP-H offset	(SDA 9188)		

Item number	Adjustment Item	Data range	Standard DATA				Note	Device		
			50 Hz		60 Hz					
			Normal	Wide	Normal	Wide				
37	CTR	00~0F		0A			Contrast	(SDA 9188)		
38	EPL	00~01		01			External PLL	(SDA 9188)		
39	FWV	00~01		01			Frame Width V	(SDA 9188)		
3A	FWH	00~01		01			Frame Width H	(SDA 9188)		
3B	DVI	00~0F		07			Setting Delay VSI	(SDA 9188)		
3C	DVP	00~0F		0F			Delay VSP Pulse	(SDA 9188)		
3D	BRT	00~0F		0C			Frame BRIGHT Data	(SDA 9188)		
3E	LEV	00~0F		00			Level Adjust	(TDA 9840)		
3F	STR	00~3F		02			Stereo Adjust	(TDA 9840)		
40	AXG	00~01		00			AUX Output Gain	(TDA 8204)		
41	AXM	00~01		00			AUX Output Mute	(TDA 8204)		
42	VCX	00~01		00			VCXO free run	(TDA 8204)		
43	ERC	00~01		00			Error count Time	(TDA 8204)		
44	MXE	00~01		00			MAX. allowed Error	(TDA 8204)		
45	SRO	00~01		00			SRO set Bit	(TDA 8204)		
46	ATO	00~00		01			Auto Selection	(TDA 8204)		
47	SYS	00~01		00			System select	(TDA 8204)		
48	FSW	00~03		00			Force Switch	(TDA 8204)		
49	SYN	00~01		01			Synthesizer	(TDA 8204)		
4A	VCR	00~01		00			VCC Reference Sw	(CXP 1315 P)		
4B	SEL	00~FF		5F			Separation Level	(CXP 1315 P)		
4C	DCS	00~3F	Normal	1 F	Wide	1 F	DC Shift	(CXA 1526 P)		
4D	UYB	00~3F		1 F		1 F	Upper Y Bow	(CXA 1526 P)		
4E	LYB	00~3F		1 F		1 F	Lower Y Bow	(CXA 1526 P)		
4F	HAP	00~3F		1 F		1 F	H. Amp	(CXA 1526 P)		
50	HTL	00~3F		1 F		1 F	H. Tilt	(CXA 1526 P)		
51	UCB	00~3F		1 F		1 F	Upper Corner Bow	(CXA 1526 P)		
52	UTL	00~3F		1 F		1 F	Upper Tilt	(CXA 1526 P)		
53	LCB	00~3F		1 F		1 F	Lower Corner Bow	(CXA 1526 P)		
54	LTL	00~3F		1 F		1 F	Lower Tilt	(CXA 1526 P)		
55	TXP	00~0F		00			Teletext Picture	(Teletext μ-Con)		
56	ODL	00~FF		10			Power ON Delay	(CXP 80424)		
57	OSH	00~3F		0 F			OSD Position H	(CXP 80424)		
58	BLU	00~01		01			Blue Back Feature	(CXP 80424)		
59	ROC	00~0F		04			Center of Rotation	(CXP 80424)		
5A	ROS	00~07		07			Step Width	(CXP 80424)		
5B	HTR	00~3F	1F	1F	1F	1F	H Trapezoid	(CXP 80424)		
5C	MUT	00~01		01			No Sync. Mute	(CXP 80424)		
5D	DID	00~01		00			Disable Degauss	(CXP 80424)		
5E	OP0	00~FF		6D			Option 0	(CXP 80424)		
5F	OP1	00~0F		01			Option 1	(CXP 80424)		

\*1 : Input data are different according to models.

\*2 : Input data are different according to models.

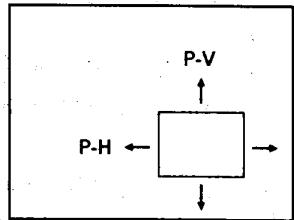
Item	CCD	Text	PinP	Jpn	Nicm	W.G	Mts	Comb
KV-L34SN11	0	1	1	0	1	1	0	1

Item	-	-	-	-	Mono	Tilt	Dcon	Chin
KV-L34SN11	0	0	0	0	0	0	1	1

### 5-3. DISPLAY POSITION ADJUSTMENT

Item Numbers 35-36

- 33 P-V Pin-P vertical position correction
- 34 PVS Pin-P vertical offset
- 35 P-H Pin-P horizontal position correction
- 36 PHS Horizontal offset

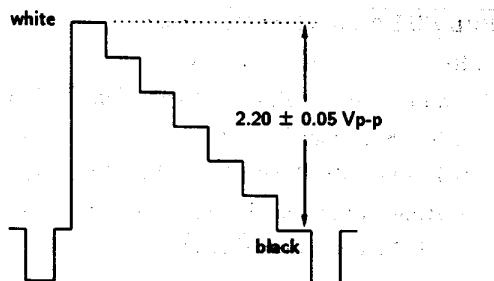


When pressing PIP "POSITION" key in the service mode, "POSITION" turns round and round automatically.

Item numbers 33-36 are set to the standard values.

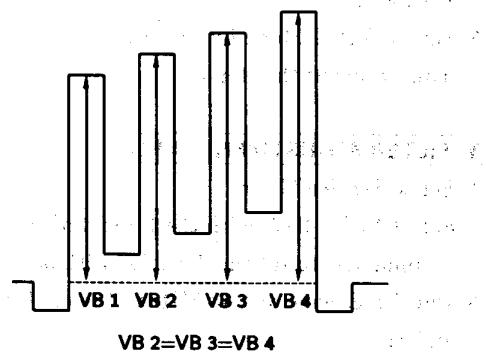
- 54 TXP Teletext picture

Corrects the brightness for when teletext is received. Standard value is 05.



#### SUB COLOR ADJUSTMENT (SCL)

1. Receive a PAL color-bar.
2. Connect an oscilloscope to the pin ⑦ (B OUT) of CN118, A board.
3. Set to Service Mode and select 03 (SCL) with [1] and [4] of the commander to adjust to VB2=VB3=VB4 with [3] and [6].
4. Press [MUTING] → [0] of the commander to write the data.
5. Adjust as step 4 and 5 by receiving NTSC color-bar.



6. Receive the PAL color-bar to set to WIDE mode by pressing [MENU]. Then set to Service Mode and adjust 03 (SCL) to write the 1 step dropped value of the step 4.
7. Receive the NTSC color-bar and adjust as step 7.

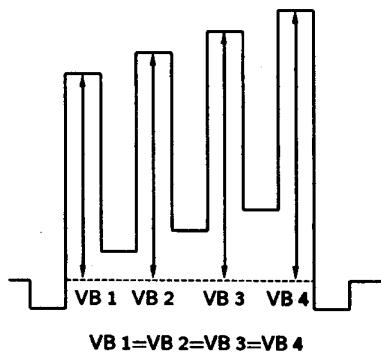
### 5-4. A BOARD ADJUSTMENT

#### SUB CONTRAST ADJUSTMENT (SCN)

1. Receive a PAL color-bar.
2. Put DC 3.0 V to the pin ⑧ (ABL IN) of IC 304, A board. Set the PICTURE 100%, BRIGHT 50% and COLOR MIN.
3. Connect an oscilloscope to the pin ⑥ (R OUT) of CN118, A board.
4. Set to Service Mode and select 01 (SCN) with [1] and [4] of the commander to adjust to  $2.2 \pm 0.05$  V.
5. Press [MUTING] → [0] of the commander to write the data.
6. Receive a NTSC color-bar and adjust 01 (SCN) same value as PAL.
7. Receive the PAL color-bar to set to WIDE mode by pressing [MENU]. Then set to Service Mode and adjust 01 (SCN) to write the 2 step dropped value of the step 4.
8. Receive the NTSC color-bar and adjust as step 7.

**SUB HUE ADJUSTMENT (SHU)**

1. Receive a NTSC color-bar.
2. Connect an oscilloscope to the pin ⑦ (B OUT) of CN 118, A board.
3. Select 04 (SHU) with **[1]** and **[4]** of the commander by setting to Service Mode and adjust to VB 1=VB 2 =VB 3=VB 4 with **[3]** and **[6]**.



4. Press **MUTING** → **0** of the commander to write the data.
5. Set to WIDE Mode by  **MENU** button to write the same value as the step 3.

**Y. FILTER ADJUSTMENT (YF1)**

1. Set to Service Mode.
2. Select 14 (Y. SW) with the **[1]** and **[4]** of the commander to set the data "3" with **[3]** and **[6]**.
3. Put SINE wave of 4.43 MHz to the pin ② (YIN) of IC304.
4. Connect an oscilloscope to the pin ① of CN105, A board.
5. Adjust so that the waveform is minimum by selecting 11 (YF1) with **[3]** and **[6]**.  
Change back 14 (Y. SW) to data "1".
6. Press **MUTING** → **0** of the commander to write the data.

**PIP H. V. POSITION (P-H, P-V)**

1. Receive a PAL color-bar.
2. Set the PIP picture by pressing **PIP** button of the commander.
3. Set to Service Mode.
4. Select 33 (P-V) with the **[1]** and **[4]** of the commander to set the data "07" with **[3]** and **[6]**.
5. Select 35 (P-H) to set the data "0A".
6. Receive a NTSC color-bar.
7. Select 33 (P-V) to set the data "07" with **[3]** and **[6]**.  
Select 36 (PHS) to set the data "03" with **[3]** and **[6]**.
8. Check by pressing **POSITION** of the commander.
9. Press **MUTING** → **0** of commander to write the data.

## 5-5. PICTURE DISTORTION ADJUSTMENT

Item Numbers 23-2D

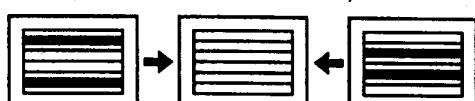
23 VSZ (V SIZE)



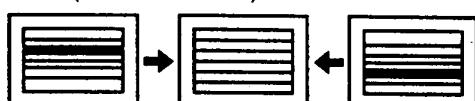
24 VSF (V SHIFT)



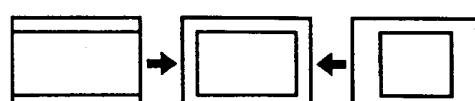
25 SCR (VERTICAL S correction)



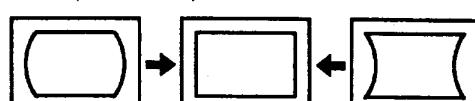
26 VLN (V LINEARITY)



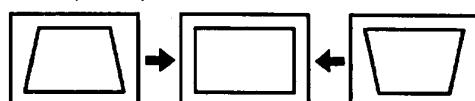
27 HSZ (H SIZE)



28 PAP (PIN AMP)

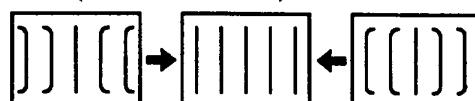


29 TLT (TILT)

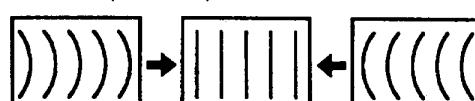


2A UCP (Upper Corner Pin)

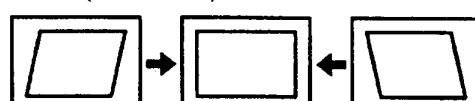
2B LCP (Lower Corner Pin)



2C VBOW (V-BOW)

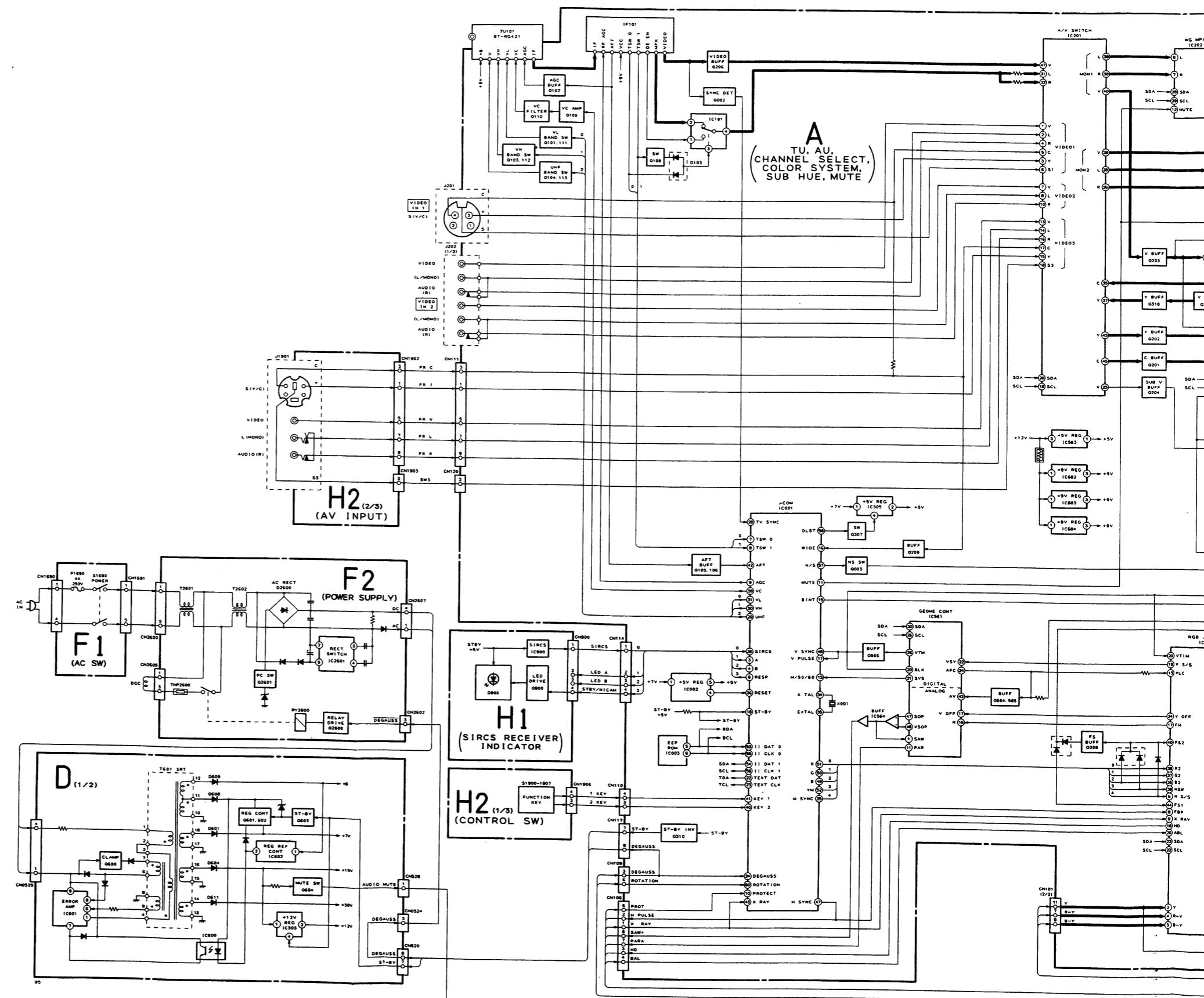


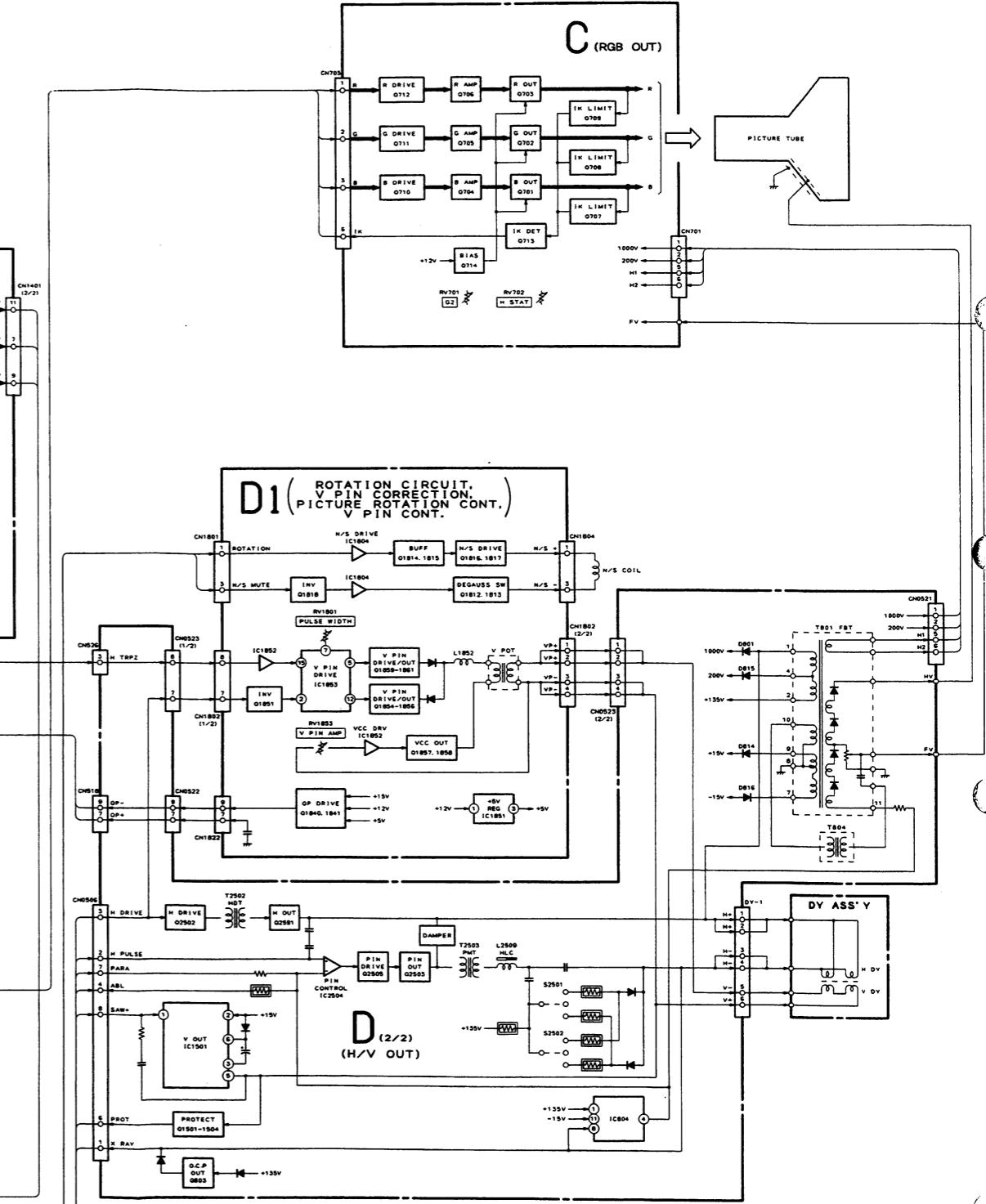
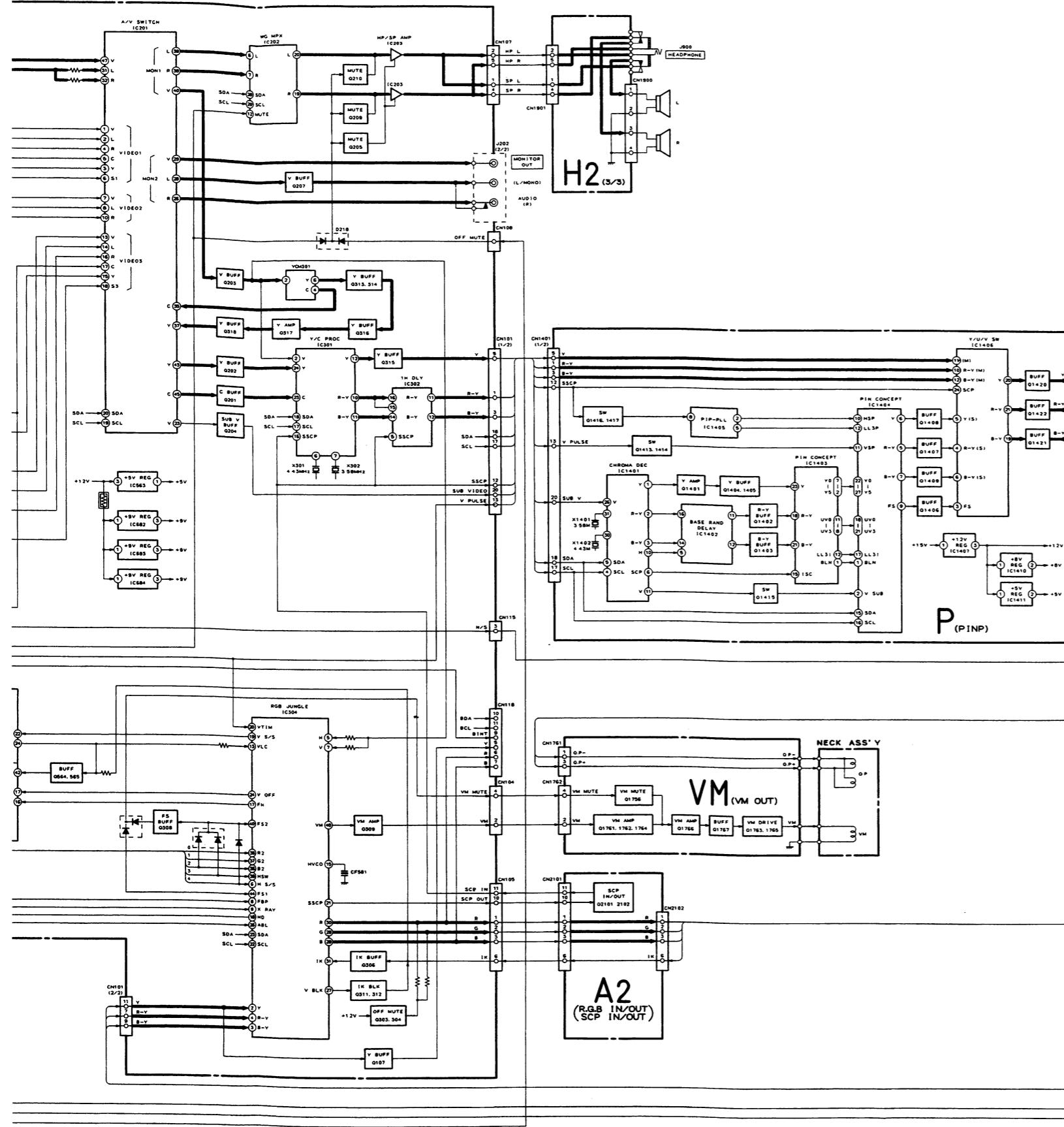
2D VAG (V-ANGLE)



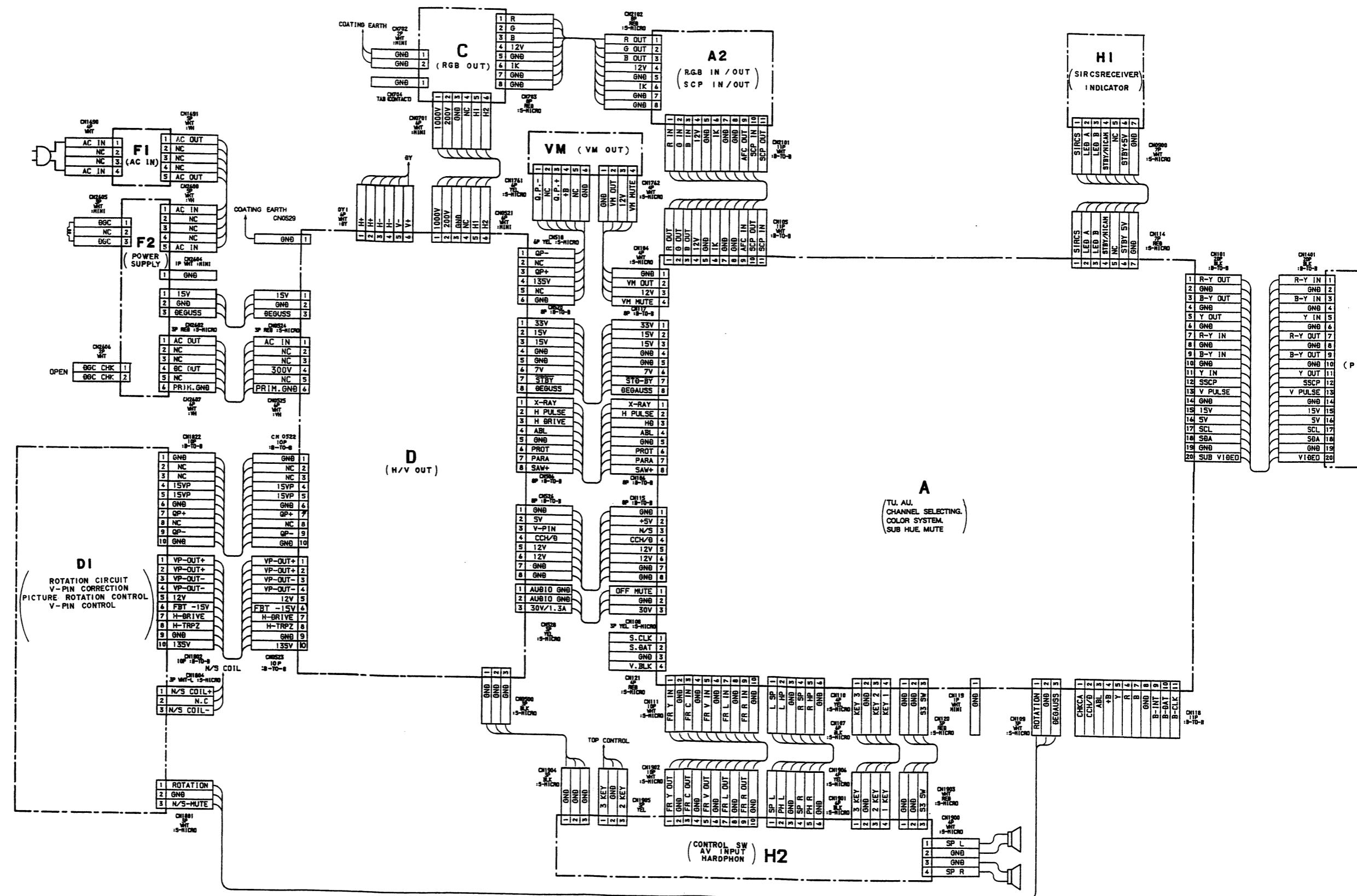
# DIAGRAMS

## 6-1. BLOCK DIAGRAM

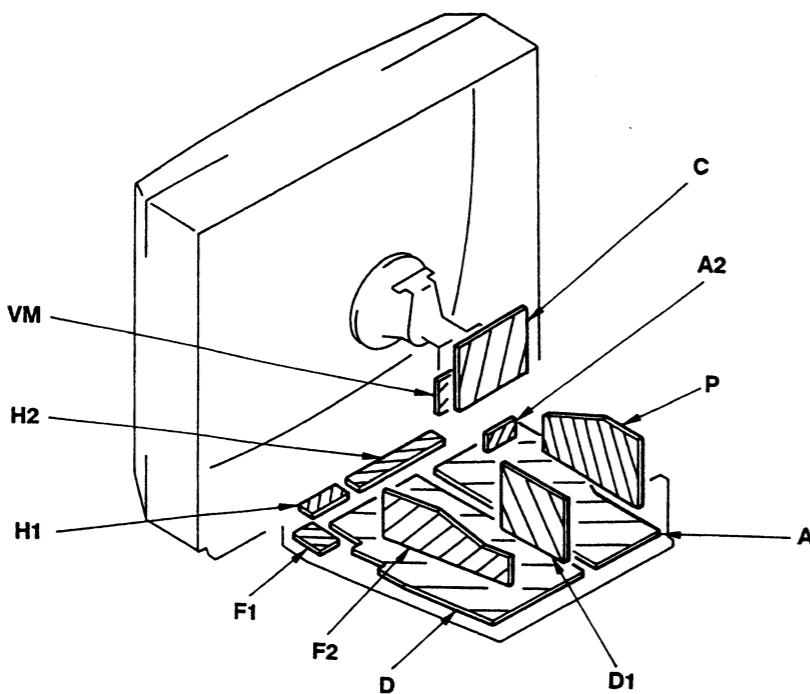




## **6-2. FRAME SCHEMATIC DIAGRAM**



## CIRCUIT BOARDS LOCATION



## 6-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

### Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\mu\text{F}$   
50 WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.  
 $\text{k}\Omega = 1000 \Omega$ ,  $\text{M}\Omega = 1000\text{K}\Omega$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm  
Rating electrical power  $\frac{1}{4} \text{W}$  (CHIP: 1/10W)

- : nonflammable resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Readings are taken with a color-bar signal input.  
no mark : PAL  
( ) : SECAM  
( ) : NTSC 3.58  
( ) : NTSC 4.43
- Readings are taken with a 10  $\text{M}\Omega$  digital multimeter.
- Voltage are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- \* : Can not be measured.
- Circled numbers are waveform reference.
- :  $\text{B}+$  bus.
- :  $\text{B}-$  bus.
- : signal path.

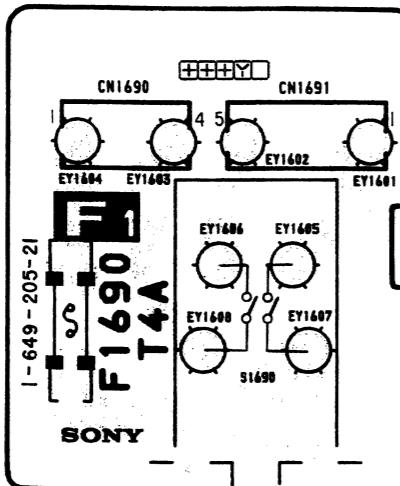
Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

### Reference information

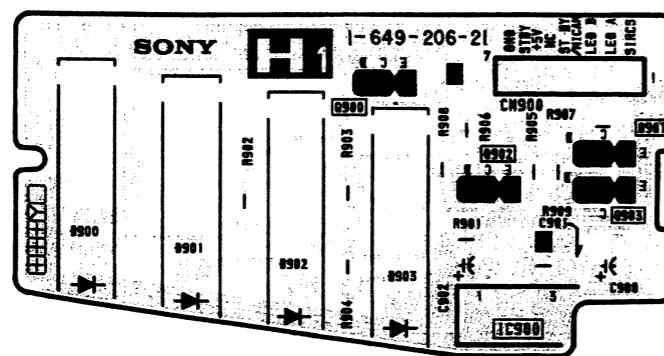
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	:	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

## **PRINTED WIRING BOARDS**

- F1 Board -



- H1 Board -



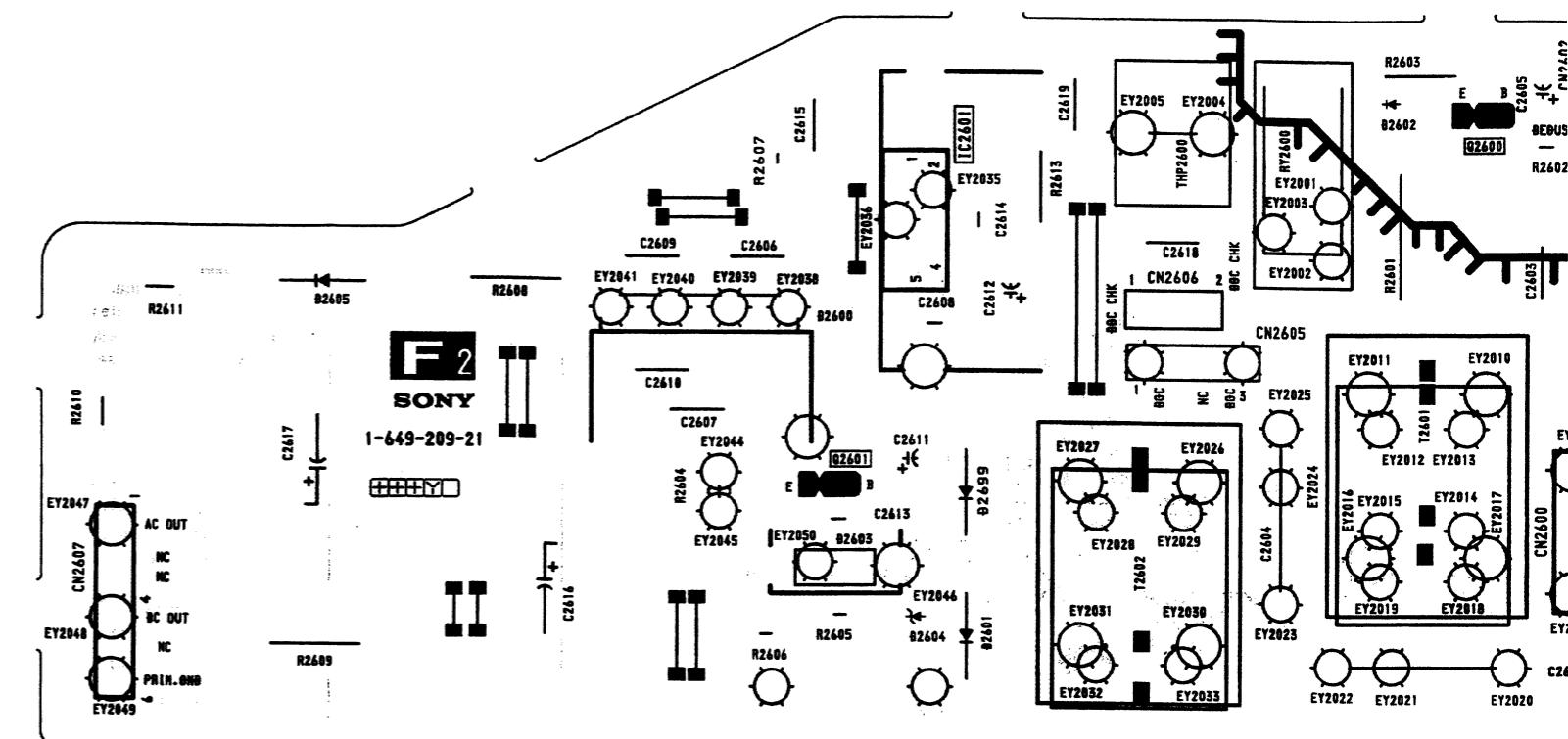
F<sub>1</sub> [AC IN]

**H<sub>1</sub>** SIRCS RECEIVER,  
INDICATOR

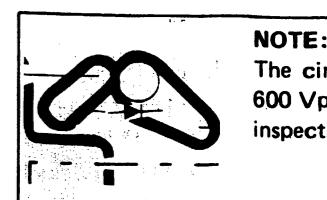
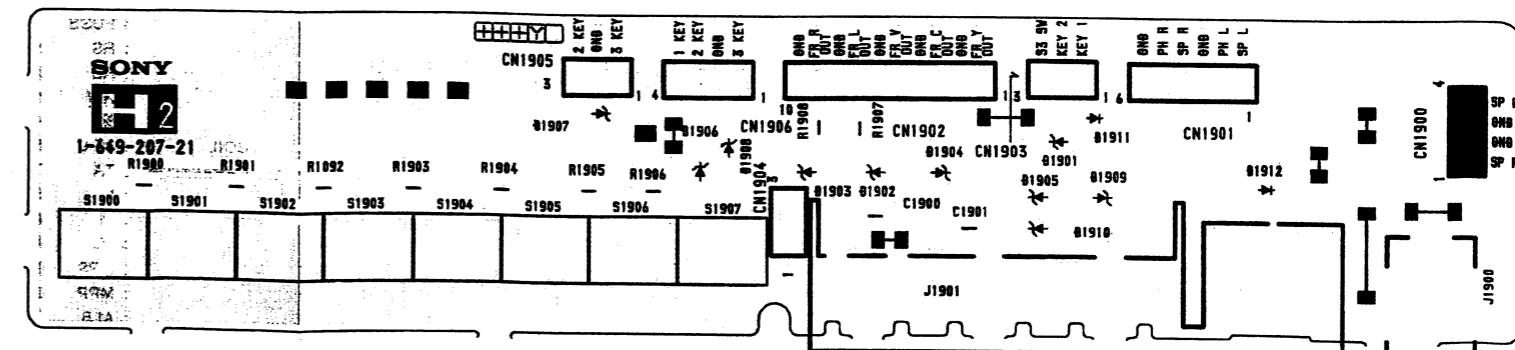
F2 [POWER SUPPLY]

**H2** CONTROL SW.  
AV INPUT,  
HEADPHONE

– F2 Board –



– H2 Board –

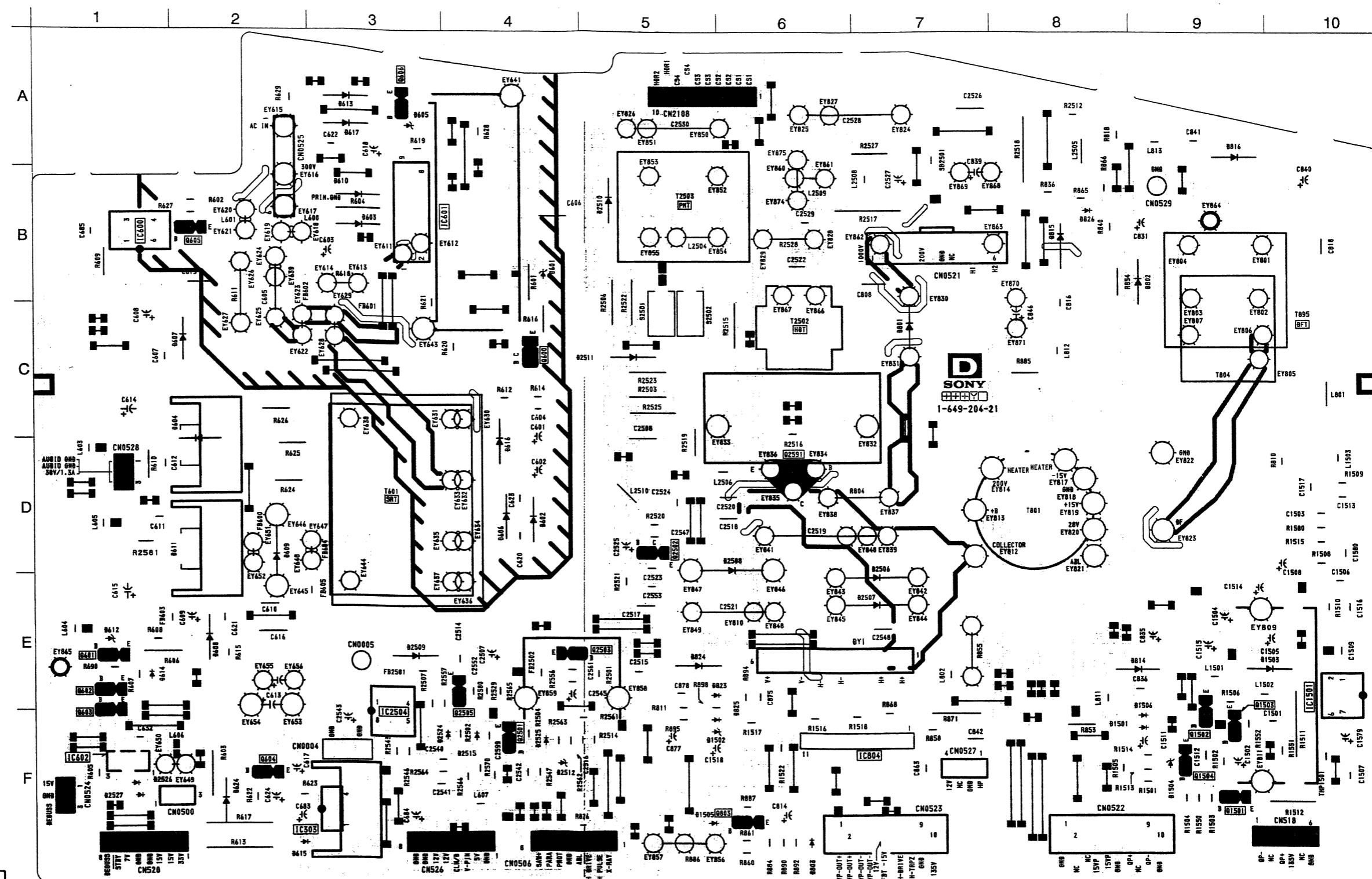


- D Board -

D HW OU

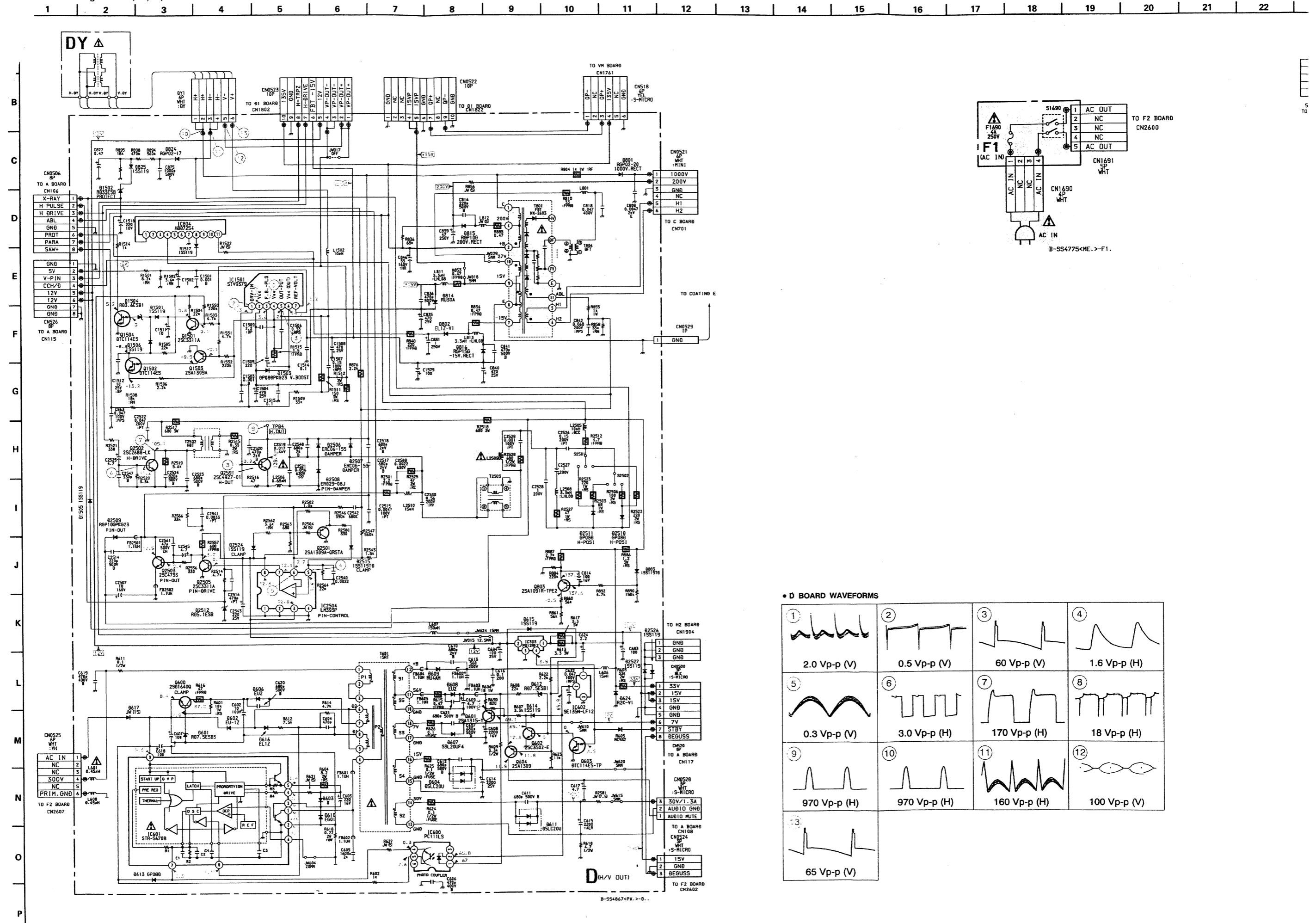
**• D BOARD**

IC		DIODE	
IC303	F - 3	D601	B - 4
IC600	B - 1	D602	D - 4
IC601	B - 3	D604	C - 2
IC602	F - 1	D606	D - 4
IC804	F - 7	D607	C - 2
IC1501	E - 10	D608	E - 2
IC2504	E - 3	D609	D - 2
		D610	B - 3
		D611	D - 2
		D612	E - 1
		D613	A - 3
		D614	E - 1
		D615	F - 2
		D616	D - 4
		D617	A - 3
		D624	F - 2
TRANSISTOR		D801	C - 7
		D802	B - 9
		D803	F - 6
Q600	C - 4	D814	E - 9
Q601	E - 1	D815	B - 8
Q602	E - 1	D816	A - 9
Q603	E - 1	D824	E - 5
Q604	F - 3	D825	E - 5
Q803	F - 6	D1501	E - 9
Q1501	F - 9	D1502	F - 5
Q1502	E - 9	D1503	E - 10
Q1503	E - 9	D1504	F - 9
Q1504	F - 9	D1505	F - 5
Q2501	F - 4	D1506	E - 9
Q2502	D - 5	D2506	D - 7
Q2503	E - 4	D2507	E - 7
Q2505	E - 4	D2508	D - 6
Q2591	D - 6	D2509	E - 3
		D2510	B - 5
		D2511	C - 5
		D2512	F - 4
		D2515	F - 4
		D2524	F - 3
		D2526	F - 1
		D2527	F - 1

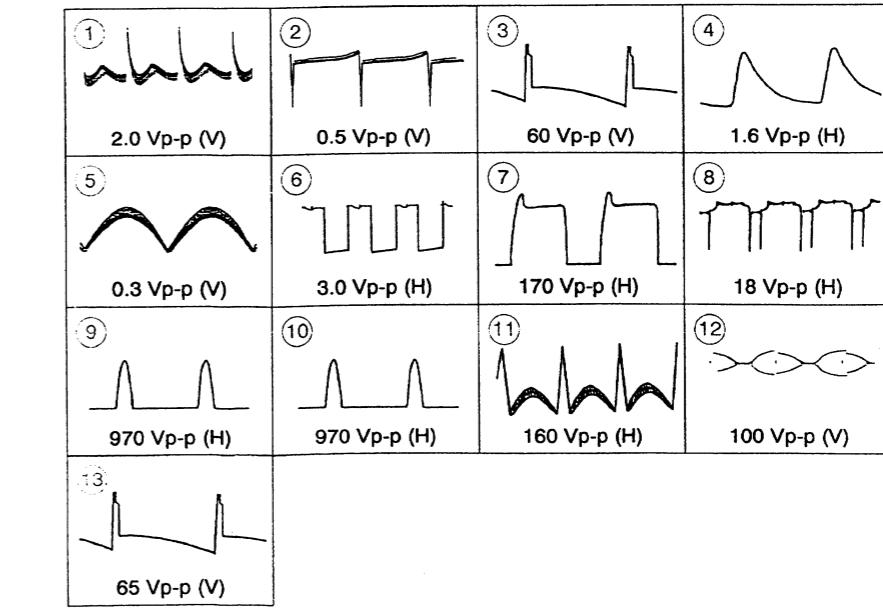


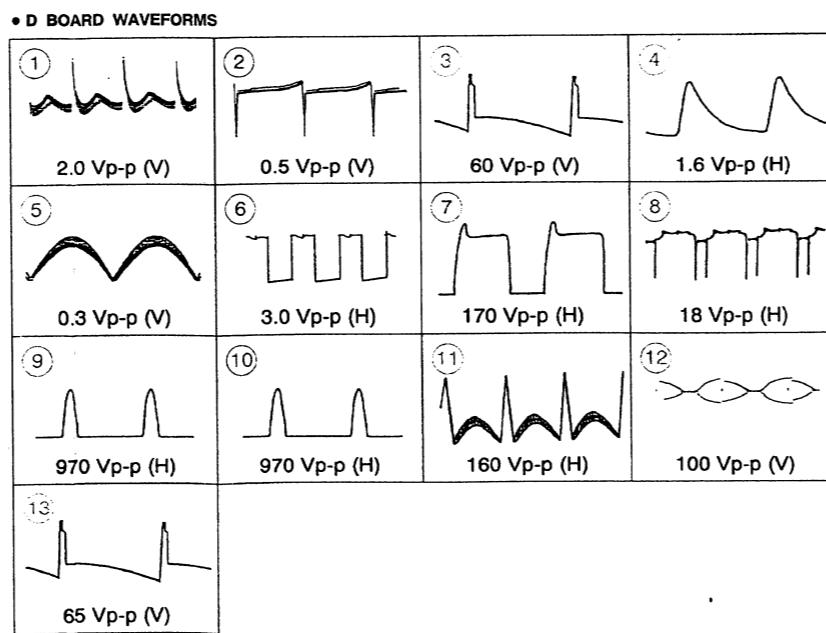
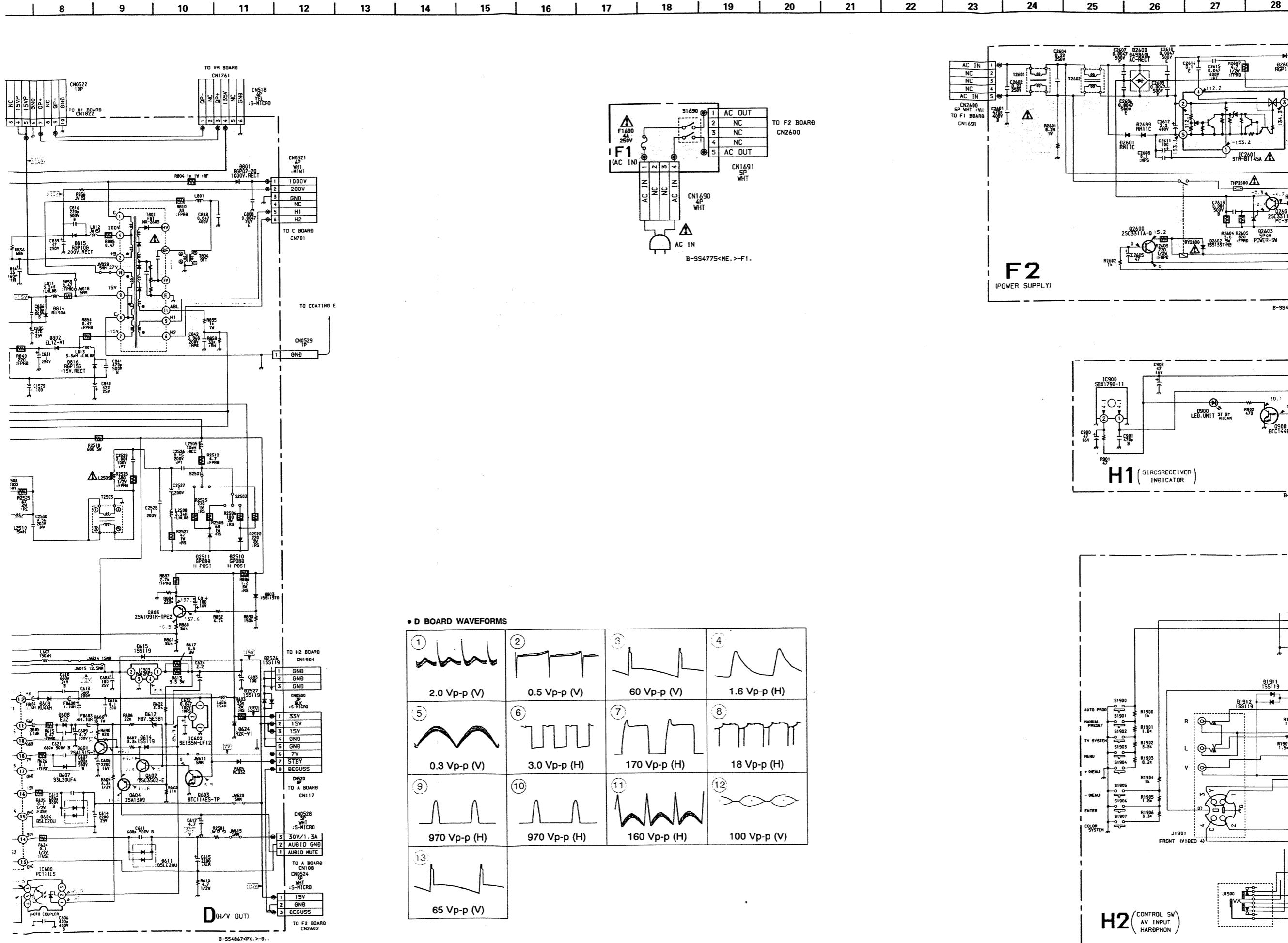
ted as left contains high voltage of over  
ist be paid to prevent an electric shock in  
ring.

chematic Diagrams of D, F1, F2, H1 and H2 Boards

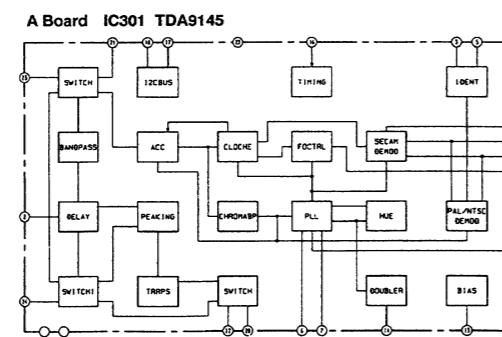
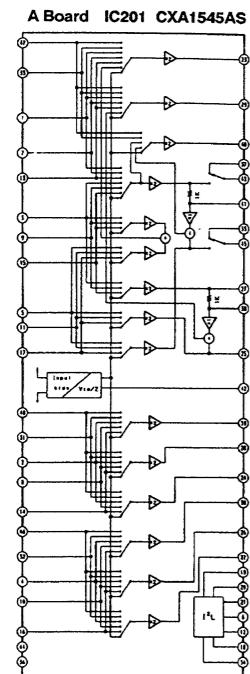
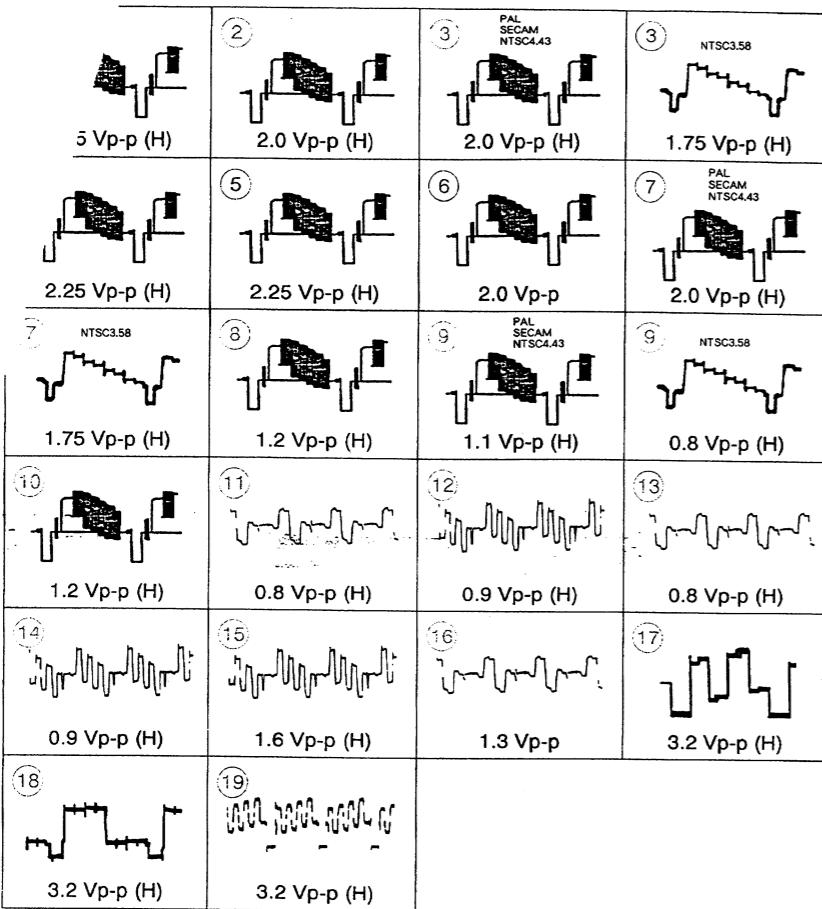


• D BOARD WAVEFORMS





## **Diagram of A Board**



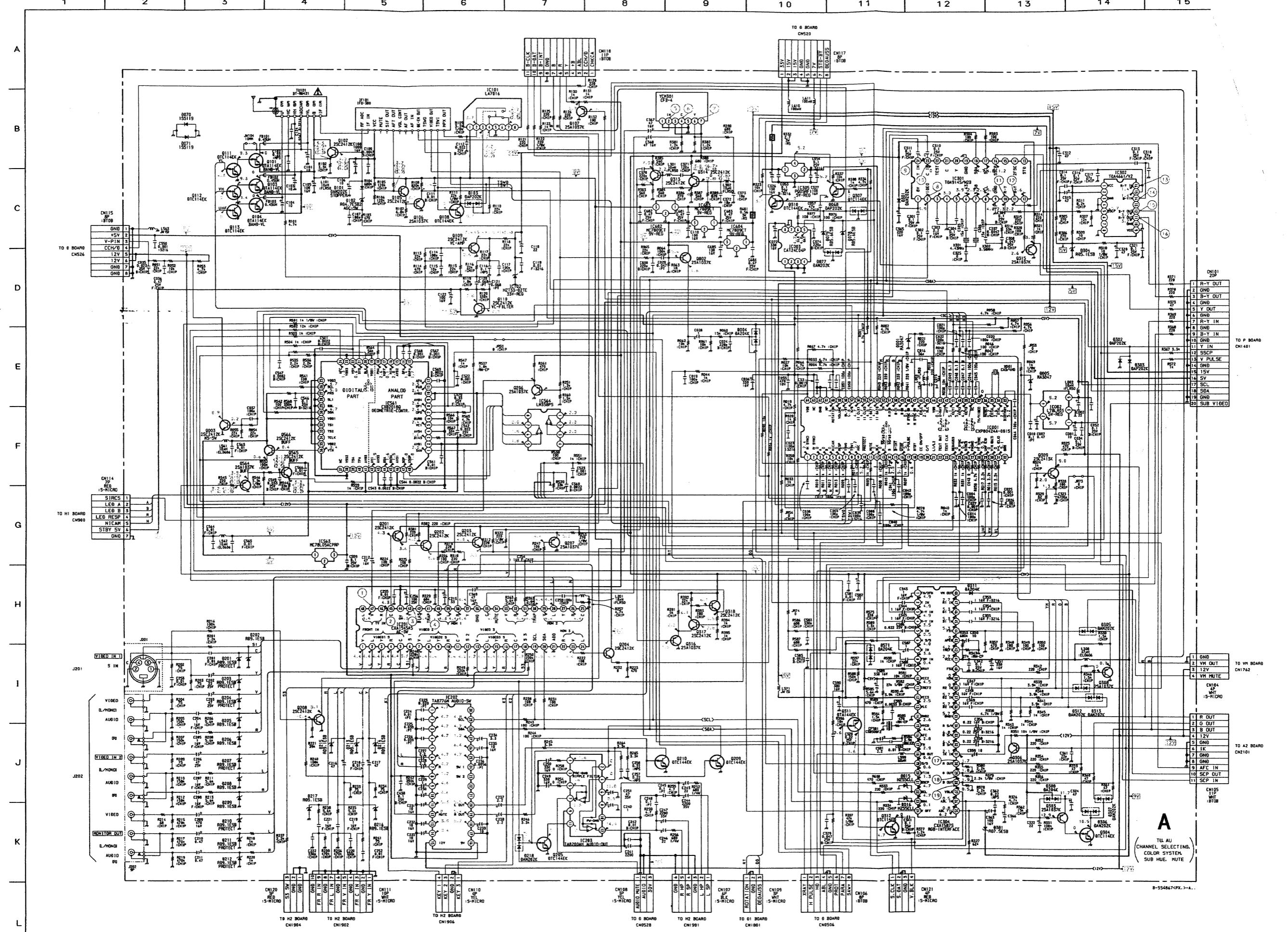
## Schematic diagrams

D F1 F2

H1 H2 board:

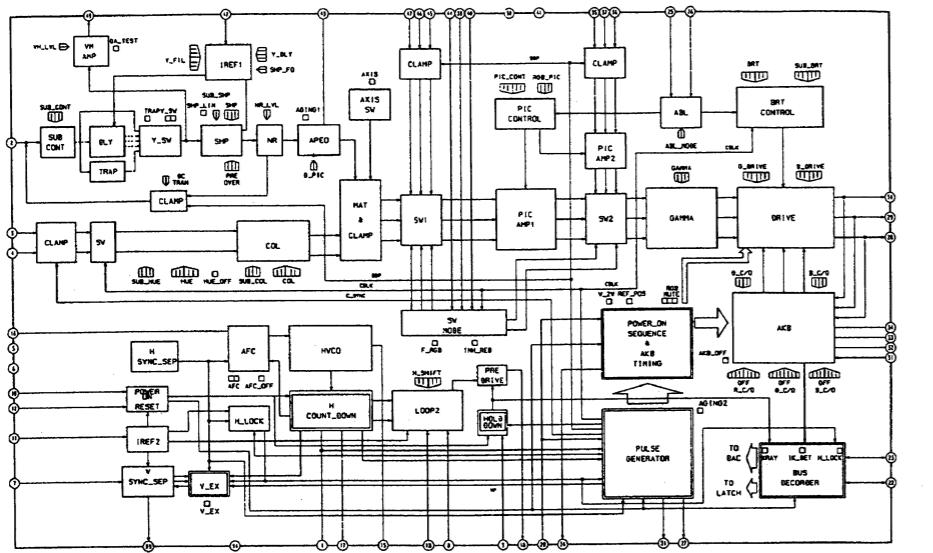
## Schematic diagram

A board →



TU, AU,  
CHANNEL SELECTION,  
COLOR SYSTEM,  
SUB HUE, MUTE

A Board IC304 CXA1587S

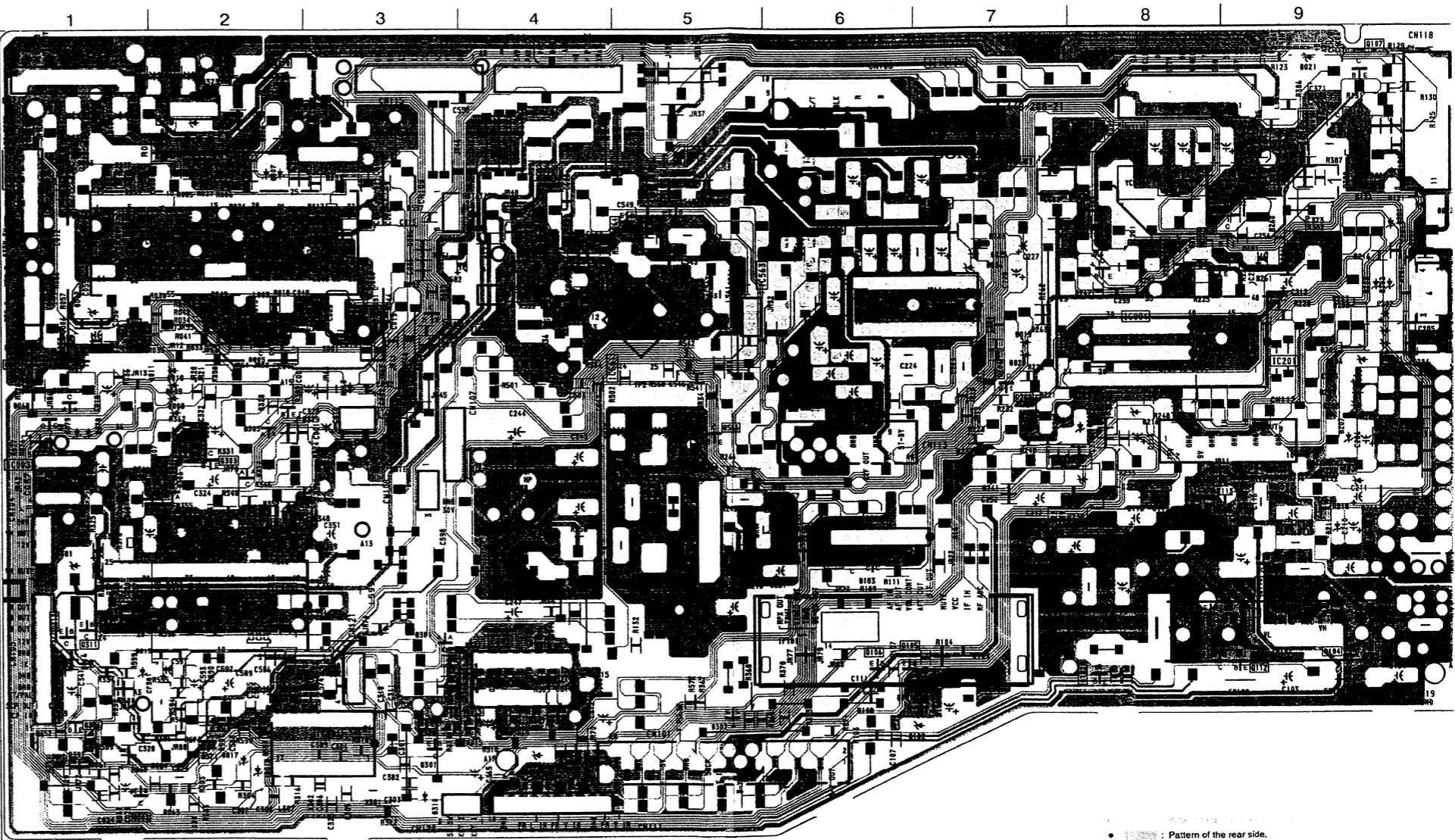


• A BOARD

IC	Q104	E - 9	Q312	D - 1	D204	C - 9	IF BLOCK
IC001	B - 2	Q105	E - 6	Q313	B - 9	D205	B - 9
IC002	C - 3	Q106	E - 6	Q314	A - 9	D206	C - 9
IC003	C - 1	Q107	A - 9	Q315	E - 3	D207	C - 9
IC101	D - 6	Q108	D - 6	Q316	A - 9	D208	C - 9
IC102	C - 8	Q109	D - 9	Q317	A - 9	D209	C - 9
IC201	C - 9	Q110	D - 9	Q318	A - 8	D210	D - 9
IC202	B - 6	Q111	D - 9	Q564	B - 5	D211	D - 9
IC203	D - 5	Q112	E - 9	Q565	B - 5	D212	D - 9
IC301	E - 3	Q113	E - 9	Q566	C - 5	D213	C - 8
IC302	E - 4	Q201	B - 9			D214	C - 8
IC304	D - 2	Q202	B - 8			D215	C - 8
IC305	A - 2	Q203	B - 8			D216	C - 8
IC561	C - 5	Q204	C - 7	D001	B - 2	D217	C - 8
IC563	B - 5	Q205	D - 5	D004	C - 1	D218	D - 5
IC564	B - 4	Q206	B - 9	D005	C - 2	D301	D - 3
IC682	A - 7	Q207	B - 8	D015	E - 1	D302	E - 5
IC683	B - 6	Q208	C - 7	D016	E - 1	D303	E - 2
IC684	B - 6	Q209	D - 6	D068	C - 1	D304	E - 4
		Q210	D - 5	D077	C - 1	D305	C - 2
		Q303	C - 2	D078	C - 1	D306	D - 2
		Q304	C - 2	D079	C - 1	D307	C - 2
		Q306	E - 1	D101	E - 7	D308	C - 2
TRANSISTOR		Q307	A - 1	D102	E - 6	D311	C - 3
Q002	E - 1	Q308	D - 2	D103	D - 6	D312	C - 2
Q003	B - 3	Q309	C - 2	D201	B - 9	D313	C - 2
Q0101	D - 9	Q310	A - 2	D202	B - 9	D381	D - 1
Q0102	E - 8	Q311	D - 1	D203	B - 9	D571	E - 2

## **PRINTED WIRING BOARDS**

### **- A Board -**

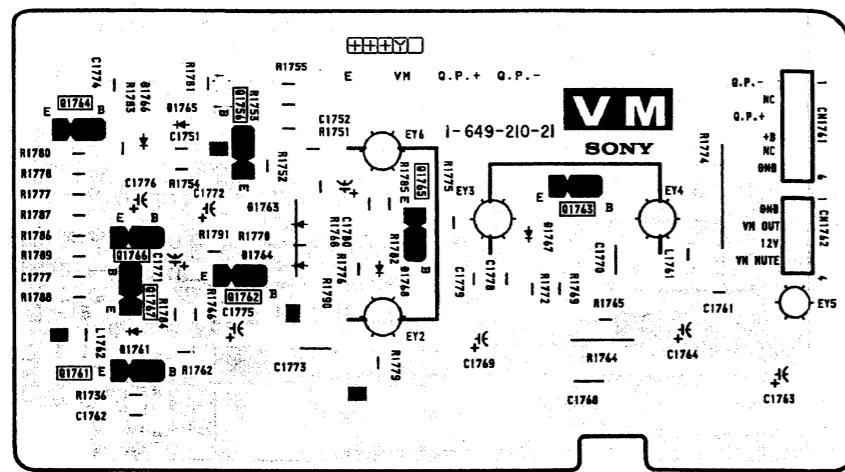


#### **Pattern of the rear side.**

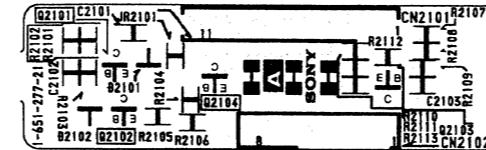
**VM** [VM OUT]

## **PRINTED WIRING BOARDS**

- VM Board -



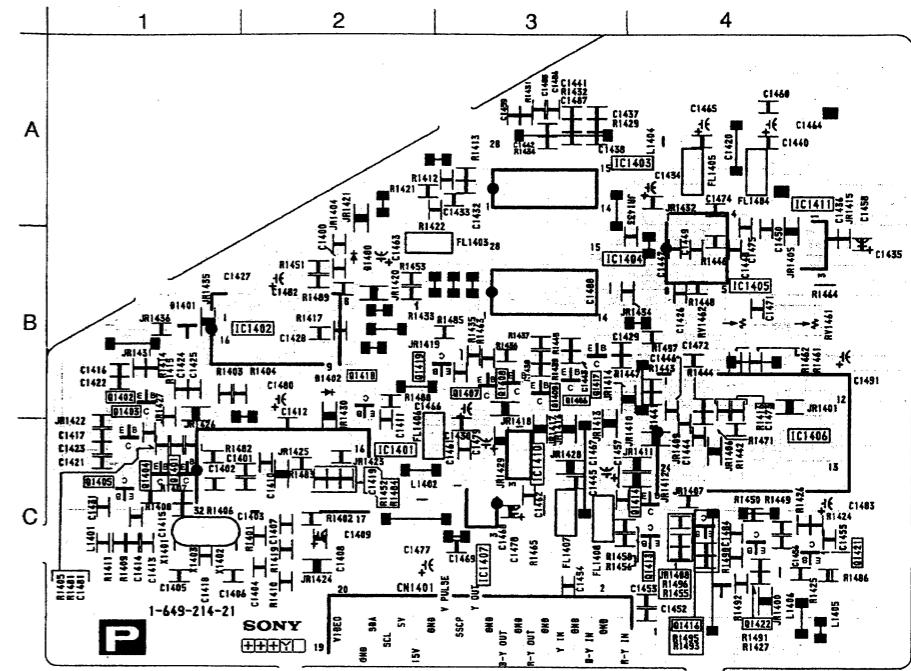
– A2 Board –



A2 [ R, G, B IN/OUT,  
SCP IN/OUT ]

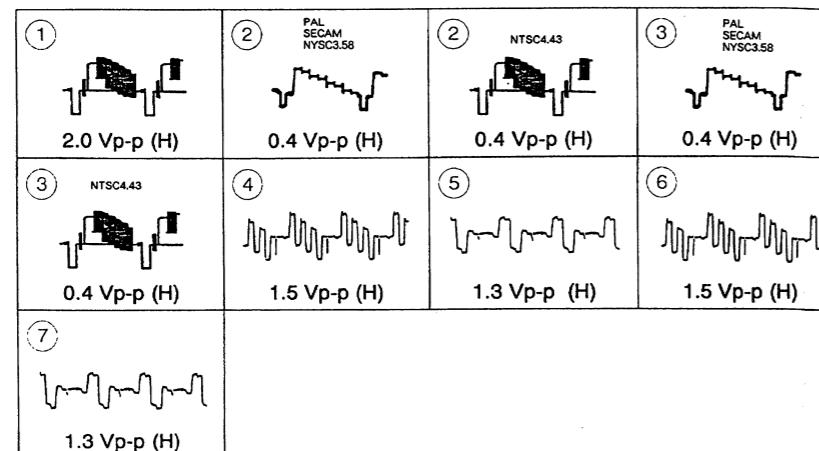
P IN P

- P Board -

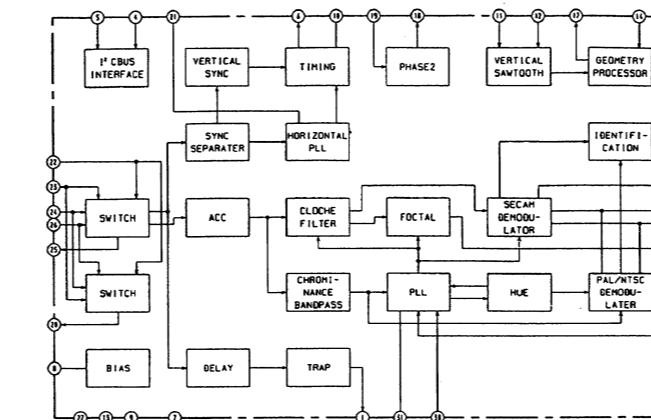


• P BOARD

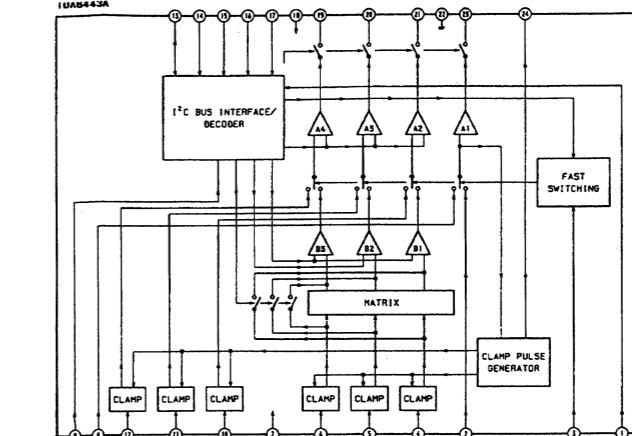
- P BOARD WAVEFORMS



P Board IC1401 TDA91



P Board IC1406 TDA8443



CN1761

AP  
VEL  
S-MICRO

Q.P. - 1  
NC 2  
Q.P. + 3  
+B 4  
NC 5  
GNB 6

TO A BOARD CN518

CN1742  
AP  
WHT  
S-MICRO

GNB 1  
VM OUT 2  
12V 3  
VM MUTE 4

TO A BOARD CN104

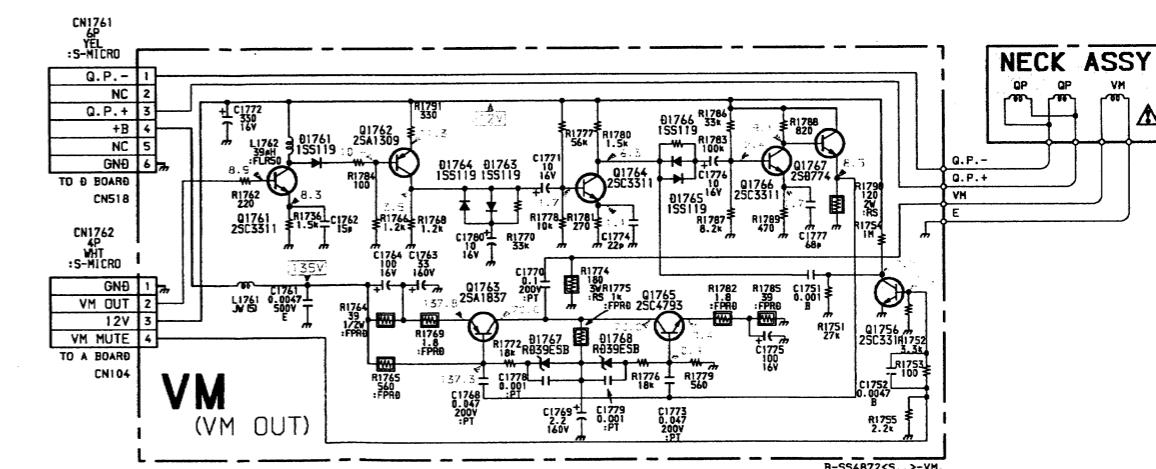
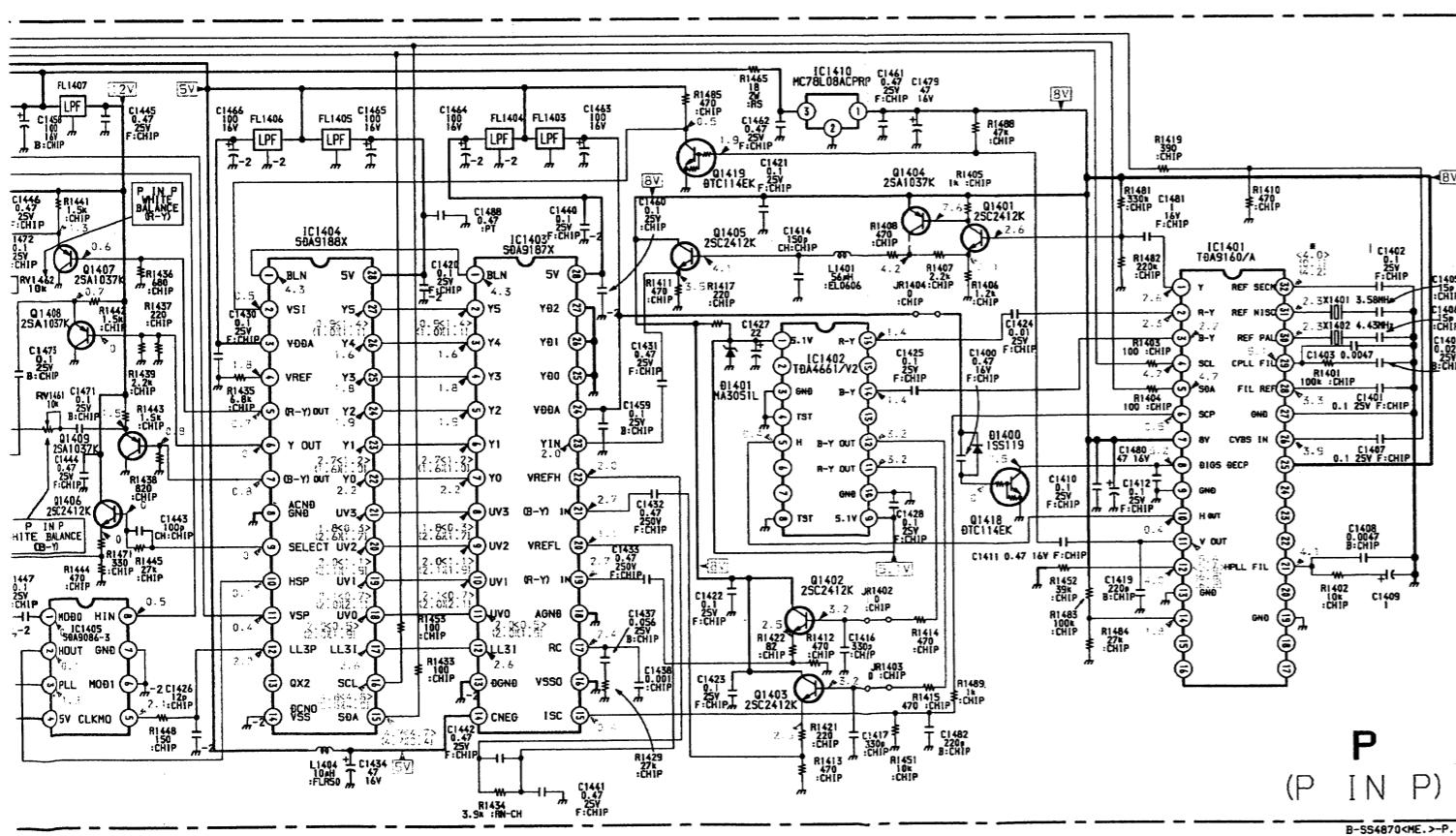
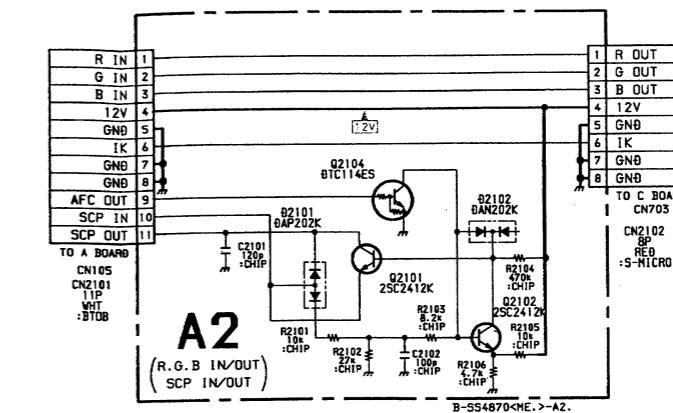
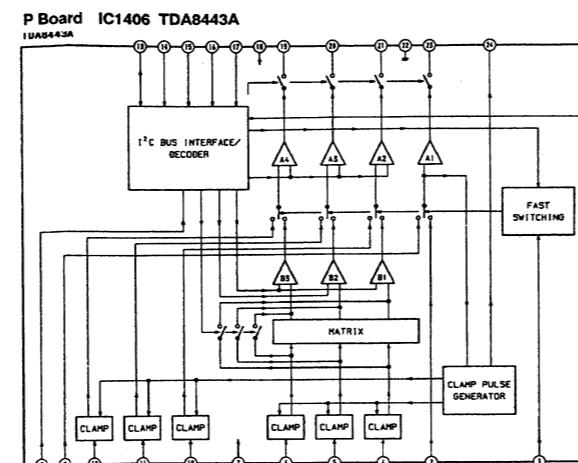
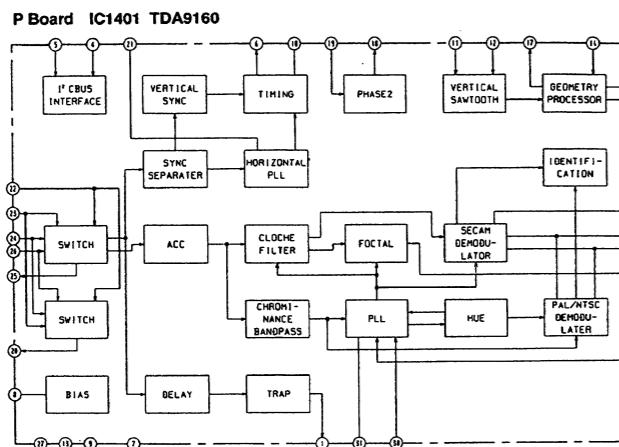
1 C1722  
14V  
L1762  
59mA  
T1760  
8.9

R1764  
22K  
01761  
2SC5351  
R1765

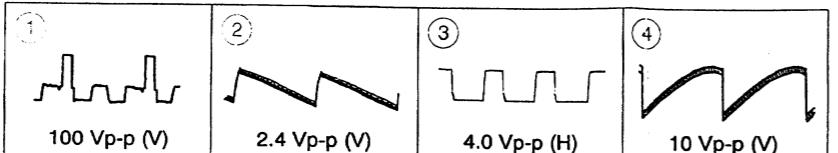
L1761  
JW15  
0.165A  
SDBV

**VM**  
(VM OUT)

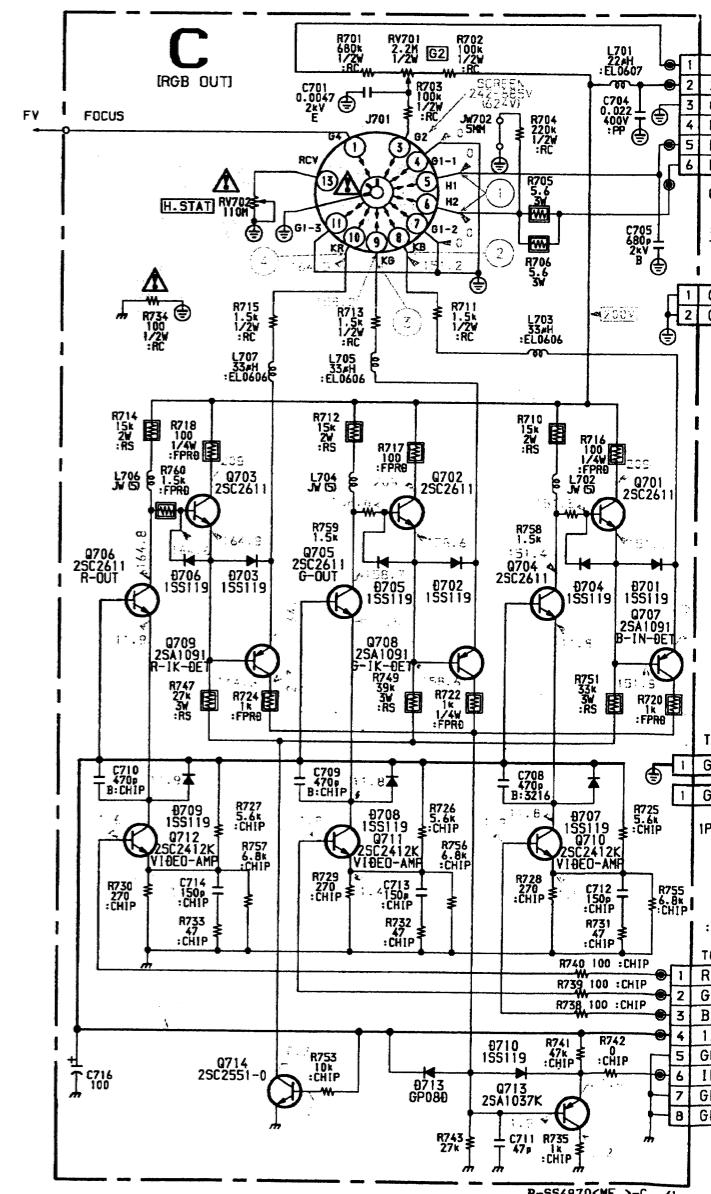
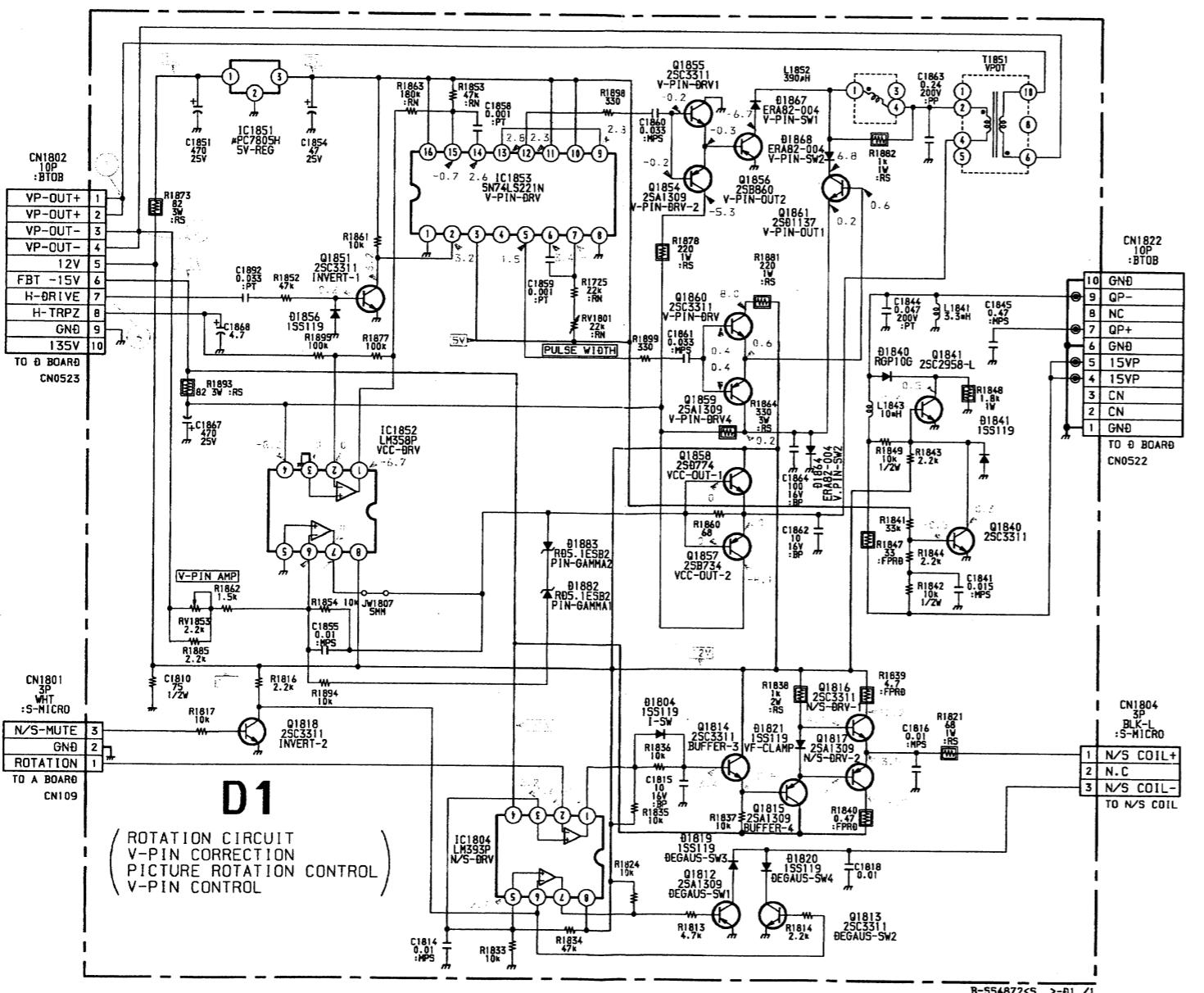
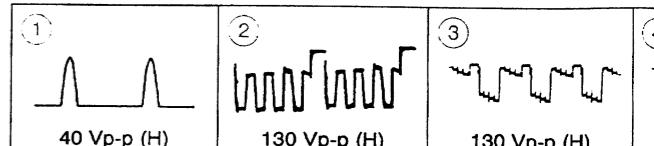
VM

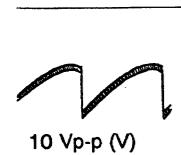


- D1 BOARD WAVEFORMS

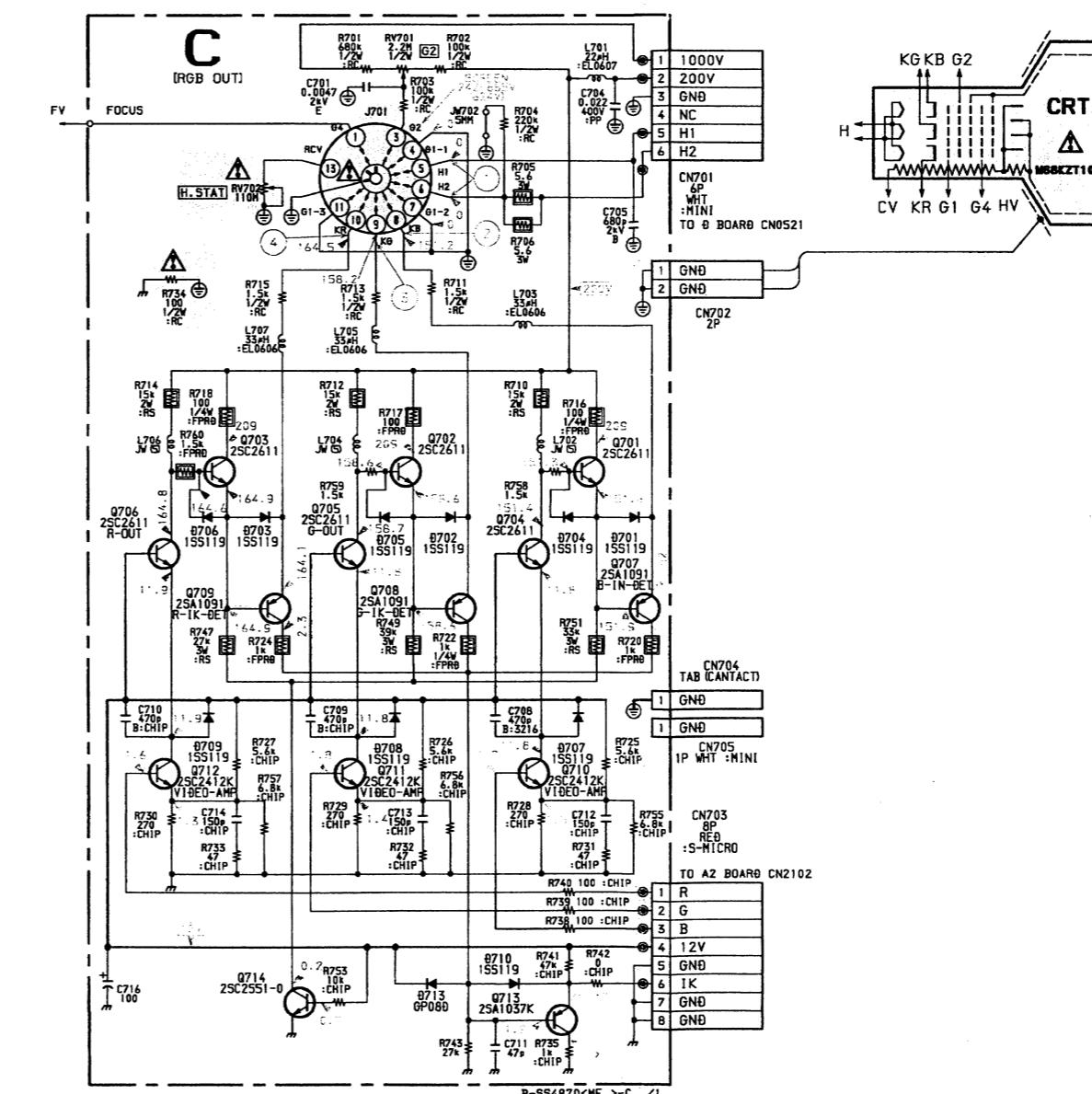
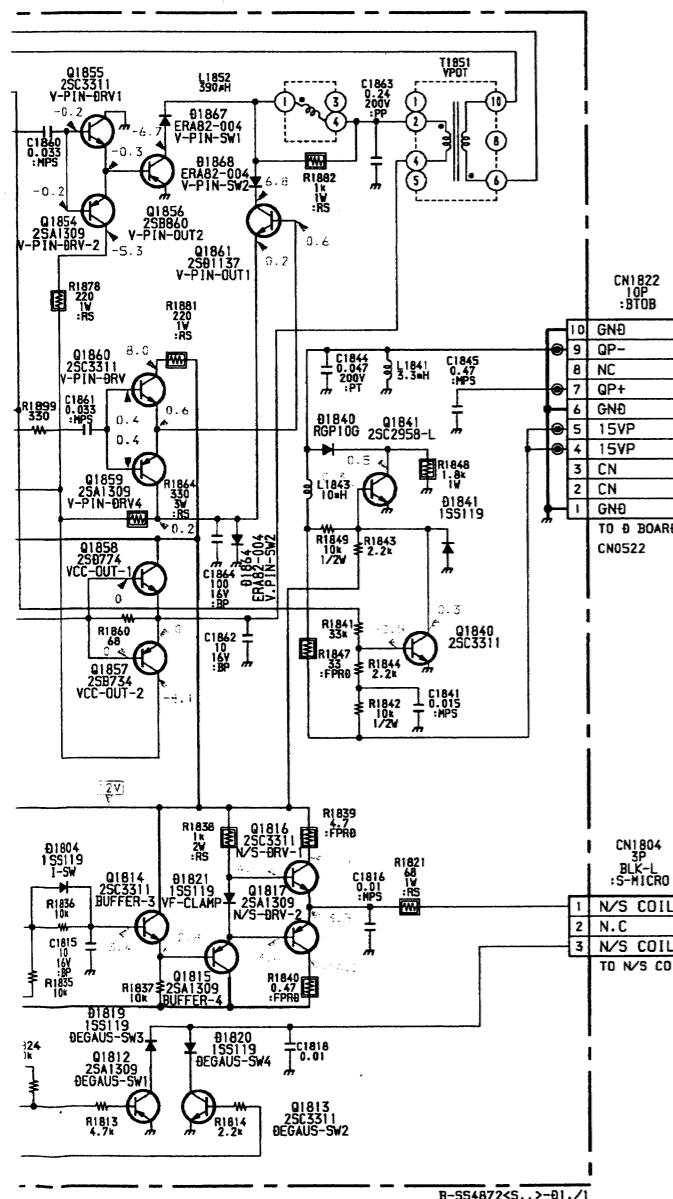
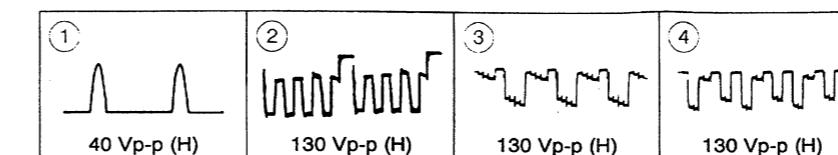


- C BOARD WAVEFORMS



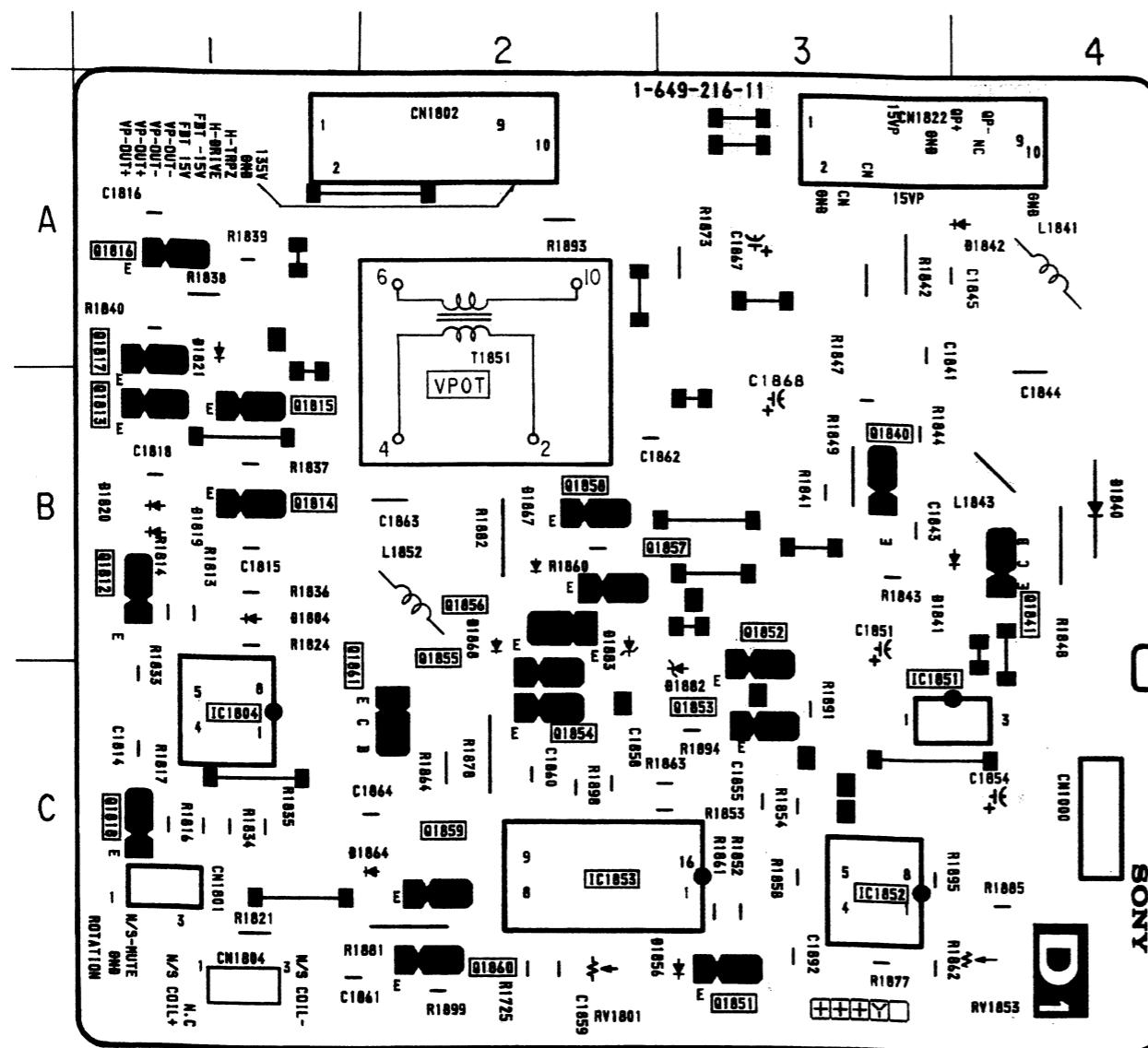


#### • C BOARD WAVEFORM



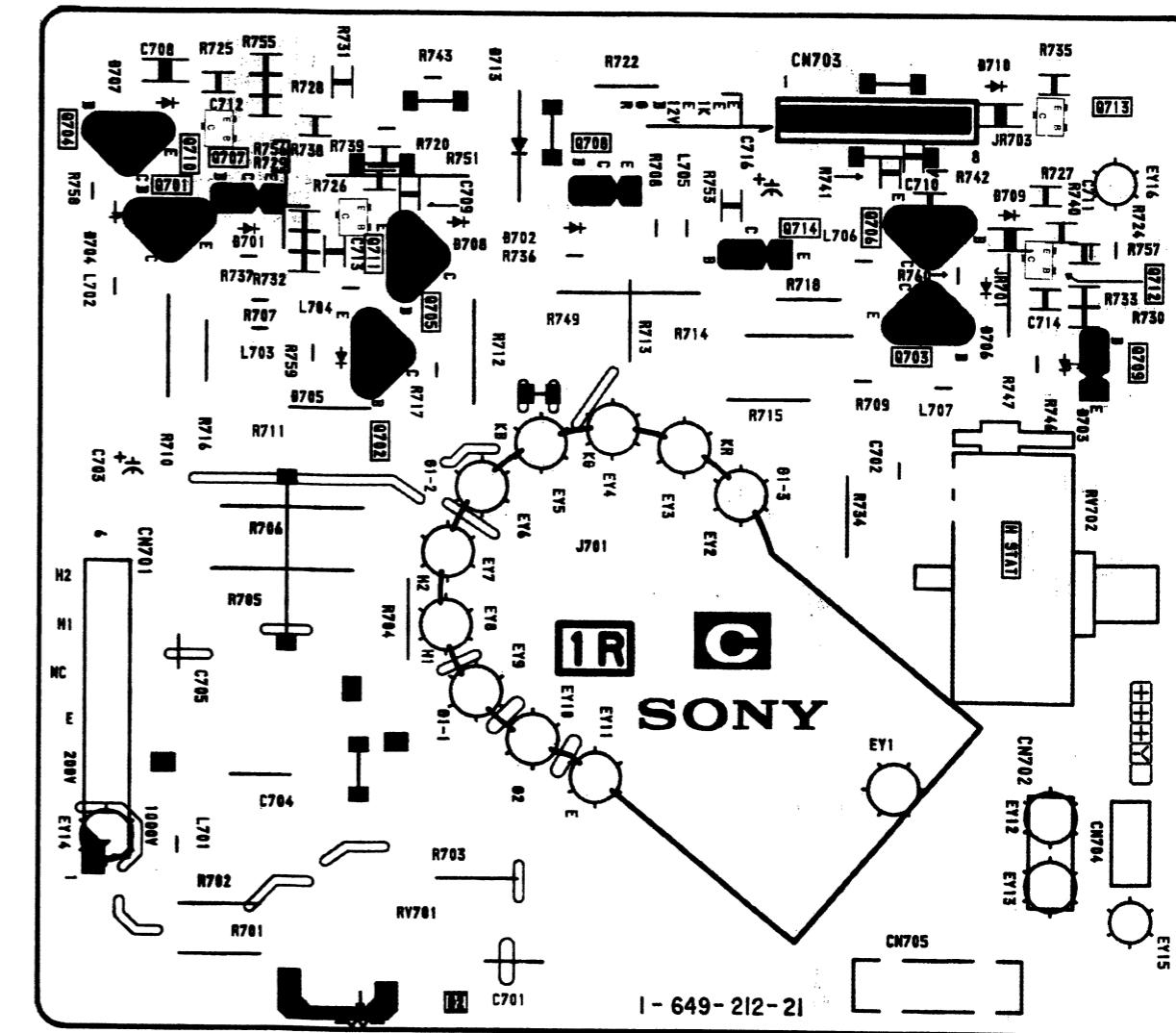
PRINTED WIRING BOARDS

- D1 Board -



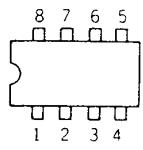
**C** [R, G, B OUT]

- C Board -



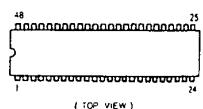
## 5-5. SEMICONDUCTORS

CAT24C04P  
LM358P  
LM393P  
SDA9086-3  
 $\mu$ PC358C  
 $\mu$ PC393C



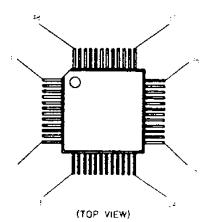
(Top view)

CXA1545AS  
CXA1587S



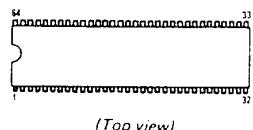
(TOP VIEW)

CXD2018Q



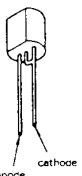
(Top view)

CXP80424  
CXP80424-SV4652



(Top view)

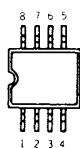
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LA7016

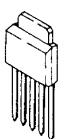


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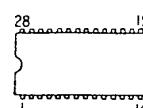


(TOP VIEW)

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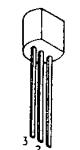


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SDA9188X

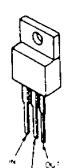


(Top view)

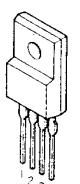
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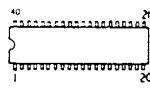
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PQ05RF1

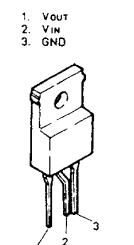


SAA5243P/T



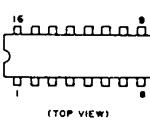
(Top view)

SE135N-LF12



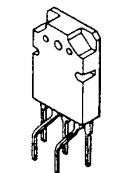
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2. V<sub>in</sub>  
3. GND

SN74LS221N  
TDA4661/V2  
TDA9821

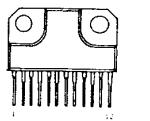


(TOP VIEW)

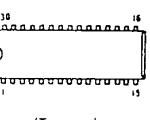
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TA8200AH

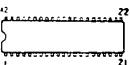


TA8776N



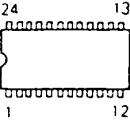
(Top view)

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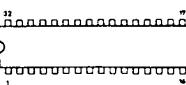
(Top view)

TDA8443A/C4  
TDA9145  
TDA9145/N2B



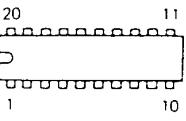
(Top view)

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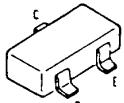
(TOP VIEW)

TDA9840

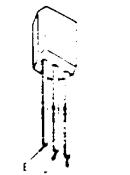


(Top view)

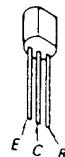
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DTA144EK  
DTC114EK  
DTC144EK  
2SA1037K  
2SA1162-G  
2SC1623-L5L6  
2SC2412K  
2SC2412K-QR  
2SC2413K  
2SC2413KQ



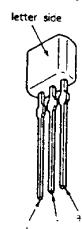
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DTC144ES



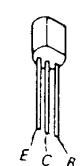
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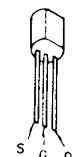
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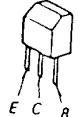
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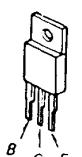
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2SD774-34

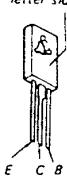


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2SD2012  
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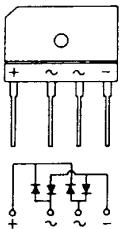


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2SC3502-E  
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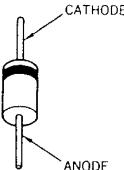
letter side



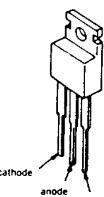
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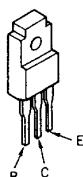
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RU4AM  
RU4DS



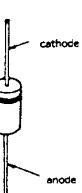
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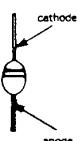
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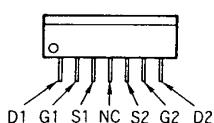
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EG01  
EL-1Z  
EU-1Z  
EU-2  
GP08D  
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RGP15J



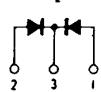
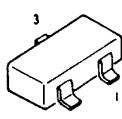
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U05G



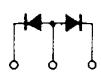
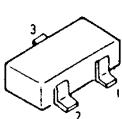
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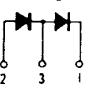
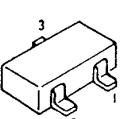
DAN202K



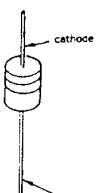
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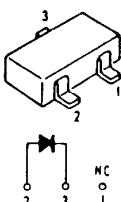
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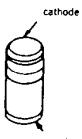
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RD39ES-B2  
RD5.1ES-B  
RD5.1ES-B1  
RD5.1ES-B2  
RD5.6ES-B  
RD7.5ES-B  
RD7.5ES-B1  
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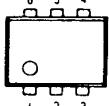
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RD6.8M-B1



MA3051L-TX



PC111LS  
PC111YS



ERC06-15S  
RGP02-20EL-6394

